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BELTSVILLE BRANCH

Cooperative State-Federal

BRUCELLOSIS ERADICATION PROGRAM

Progress Report
Calendar Year 1965

Agricultural Research Service U.S. DEPARTMENT OF AGRICULTURE

The data in this report have been compiled on a National and individual State level for the calendar years 1964-1965, to show a comparison of the accomplishments and to depict the trend of the various program activities through the cooperative efforts of the State-Federal brucellosis eradication program.

Reported by

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Animal Health Division
Agricultural Research Service
United States Department of Agriculture
Hyattsville, Maryland 20782

COOPERATIVE STATE-FEDERAL BRUCELLOSIS ERADICATION PROGRAM PROGRESS REPORT, CALENDAR YEAR 1965[1]

INTRODUCTION

The sustained effort to eradicate brucellosis from the Nation by 1975 is reflected in the accomplishments of the past year. There is no question that the available tests and methods are effective to detect and eliminate Brucella infection. The growing interest to utilize these means in the noncertified areas is encouraging but must be maintained and nurtured to achieve the elimination of brucellosis from the Nation's livestock.

Continued effort in the modified-certified areas to locate the foci of residual infection is evident. An exhaustive search for the source of new outbreaks of brucellosis is conducted in all free areas. These procedures, when diligently applied and followed to conclusion, will assure the success of the program. It is imperative that the available tools be used with maximum efficiency if the job is to be completed quickly and economically.

The basic tools have been proven to be sound, but constant review and appraisal of the results of the present procedures is necessary to keep the program in step with the changes in livestock management and technical knowledge. Field investigations and other special studies are in progress to evaluate a new antigen for a field test on cattle plasma, a new procedure to increase the sensitivity of ring tests for large dairy herds, and new supplemental blood tests to augment the present battery of tests used on samples from problem herds. These projects and others will be of value in maintaining and possibly increasing the rate of progress toward eradication.

CERTIFIED BRUCELLOSIS-FREE AREAS

Again, as in 1964, the number of counties achieving Certified Brucellosis-Free status exceeded the number of counties qualifying for initial modified certified status. There were 226 counties established as free areas compared with only 95 new modified-certified counties last year.

In addition to the county statistics, three States--Connecticut, Vermont, and Wisconsin--achieved certified-free status. The success in these States leaves only Massachusetts to complete its testing in the New England area to qualify for free status. This is expected to occur early in 1966. The addition of Wisconsin to the growing number of certified-free States is a notable accomplishment as this is the first major dairy area, ranking sixth in total cattle population, to qualify.

The recognition by modified-certified States that the goal of eradication has not yet been reached has been extremely rewarding. The emphasis on the necessity of applying all of the resources of the eradication program toward eliminating brucellosis in livestock has proven the effectiveness of the present procedures. While the rapid increase in the number of counties qualifying as free areas cannot be credited to any single factor, epidemiological investigations on infected herds have made an important contribution in these areas.

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[1] Presented at the Annual Meeting of the National Brucellosis Committee, Livestock Conservation Inc., Kansas City, Mo., February 22-24, 1966.

MODIFIED-CERTIFIED BRUCELLOSIS AREAS

The State of North Dakota was the only one to achieve modified-certified status during the calendar year. Although Iowa had completed the testing requirements for qualification in 1965, the official recognition of this achievement was not made until January 1966. Both of these areas are now concentrating on the remaining infection to eliminate the last reservoirs of brucellosis within their States.

Counting both of these States as certified areas, only 12 States, including Hawaii and Alaska, remain to be certified. At the end of the year, nearly 88 percent of the counties were certified and nearly 18 percent of all counties were designated as certified free. In the 12 noncertified States, 493 of the 862 (57 percent) counties are modified-certified areas. One third of the 369 noncertified counties in these States or 123 are engaged in area testing, while the remaining counties are participating on an individual-herd basis only.

The number of new counties attaining modified-certified status increased over the number certified in 1964. In 1965, 95 counties attained initial certification, compared to 76 in 1964 or an increase of 25 percent. This reversal of the downward trend in number of initially certified areas is indicative of the effort expended in the remaining areas to reduce the incidence of brucellosis through an active program. The sustained effort is continuing to increase the rate of testing and certification of the remaining noncertified areas is continuing.

BRUCELLOSIS (MILK) RING TEST

The frequency at which the brucellosis (milk) ring test (BRT) is conducted is an essential consideration in appraising the effectiveness of this surveillance system. The optimum frequency is considered to be four times per year under the present eradication procedures. This year 26 States reported that milk samples are collected for ring test on a quarterly basis. Twenty-two States reported collections on a three times per year schedule, while only two States are still maintaining the semiannual test. This is an increase of 10 States collecting milk samples on quarterly system over 1964.

Other factors are of equal importance to frequency of testing and must be recognized. Many States continue to ignore reactions on bulk tank or composite samples if the cream ring is not significantly darker blue than the skim portion. With the irreversible change toward even larger dairy herds, the dilution factor becomes increasingly important. Any reaction in milk samples from these herds could indicate brucellosis and should be investigated.

Projects on adjustments of ring test sensitivity to compensate for varying herd sizes are under way. The preliminary results of a field study in California indicate that a practical solution for the dilution problem may be near. However, knowledge of the number of lactating animals in the herd is essential if the test procedure is to be adjusted for herd size. This information is not being obtained in the majority of States although the information could be readily estimated if the average volume of milk per farm were divided by the average daily production figure per cow for that area. These data would be available from the dairy processing plant and agricultural statistics and would be a close approximation of herd size.

The details regarding the collecting, handling, and preserving of composite samples at each plant should be reviewed every time samples are collected. The adverse influence of certain preservatives, high temperatures, and prolonged storage on composite samples for ring testing has been reported. The detection of these conditions requires a continuous surveillance of plant procedures. Recently, a preservative was substituted for mercuric chloride in many processing plants which fortunately resulted in a change in color from the usual pink. All indications are that this preservative will cause a high percentage of the suspicious ring tests to give a "false negative" reaction. The effectiveness of this method of surveillance of commercial dairy herds depends upon the recognition of adverse conditions and prompt correction of these deficiencies.

MARKET CATTLE TESTING

The Market Cattle Testing (MCT) Program is steadily expanding. The coverage of eligible beef cattle under this surveillance procedure has been instrumental in economically recertifying many range and semirange areas. The number of animals backtagged and blood-sampled under this program have increased tenfold since 1961 and nearly doubled since 1964.

However, much of the increase was due to the rapid expansion in backtagging in primarily dairy areas, and the double coverage on dairy cows already under BRT surveillance has been determined to be an unnecessary financial burden. Results indicate that the BRT is identifying the suspicious herds at the approximate same time MCT reactors are disclosed. Thus, late in 1965 the policy covering blood collections from backtagged animals of the dairy breeds was changed to eliminate the double coverage. This policy is presently under further consideration because in many areas animals of mixed breeding but of dairy type are raised for feeding and beef purposes. The removal of this type of animal from the coverage afforded by MCT may well delay certification in many areas.

The backtagging procedure was not altered because the identification of all slaughter cattle contributes to the eradication effort of bovine tuberculosis as well as bovine brucellosis.

The key to a successful MCT program is, of course, animal identification. If a high percentage of reactors cannot be traced back through multiple transactions to the herd of origin, the program is of little value. Continuous efforts directed toward improvement in animal identification and tracing procedures has been as rewarding as the increase in the number of animals tested.

In modified-certified areas, the tracing of negative animals to specific herds is not necessary as long as the reactors can be traced and the negative animals are credited to the county of origin. A saving of clerical time is thus realized by this provision. However, even greater savings can be obtained in clerical time by recertifying entire States as one area. Two States are now developing recertification records to appraise this system. Using this method, no untoward effects on the eradication program can be foreseen. The recognition of a State as a unit without anniversary dates for each county should alleviate many administrative problems.

The 12 noncertified States are actively participating in the MCT program. During 1965, over 36 percent of the backtags applied were on animals from noncertified States, and over 41 percent of the blood samples were collected from animals from the noncertified States. Of the reactors detected under MCT, over 76 percent were traced to herds in noncertified States, but only 50 percent of infected herds found by MCT were in this area. One reason for not finding a larger percentage of infected herds among the noncertified counties is that reactors disclosed by MCT are not always followed up if the herd of origin is located in a nonarea testing county.

One statistic gained from MCT data is hard to explain. In noncertified areas, tests on infected herds of origin revealed an average of 5.3 reactors on the first test, while in modified-certified areas, the average number of reactors was 9.8 animals per herd. The comparative rate of infection for these two general areas, however, was greatly in favor of the certified areas, where 0.55 percent of the animals tested reacted compared to 2.47 percent in noncertified areas.

PROBLEM-HERD PROGRAM

The capabilities for conducting the epidemiologic studies in Brucella-infected herds were increased during the year by training additional field personnel. A 2-week specialized course in problem-herd work was presented at the University of Minnesota for both field personnel and their administrative supervisors. An awareness of the purpose and nature of the training by supervisors was deemed advantageous because of the importance of this program in areas with a low incidence of infection.

The problem-herd program is being reorganized to provide a more direct technical supervision for the epidemiologists with specialized but limited training. Closer contact with other epidemiologists under this system will provide the necessary support to conduct investigations of the more difficult problem herds in greater detail.

SWINE BRUCELLOSIS

The number of validated brucellosis-free swine herds is continuing to increase but at a slower rate than in previous years. At the end of calendar year 1965, 2,186 herds were enjoying validated status. The increase of only 246 herds during 1965, compared to an increase of 726 during 1964, points out the need for emphasizing the benefits of a validated herd to swine owners.

County validation progressed at a satisfactory pace with 43 new counties attaining this goal. The largest gains were in Nevada with 15 of 17 counties validated and in California with 14 new counties and a total of 48 out of 58 counties now validated. Eight States now have one or more Validated Brucellosis-Free counties.

The development and implementation of a swine brucellosis surveillance procedure to locate suspicious herds are desperately needed. However, several problems must be resolved for a program similar to the MCT plan to be effective. Animal identification systems enabling the tracing to herds of origin must be improved because of the long-distance movement of swine from farm to slaughter, the development of an efficient serologic test on individual swine, and an improved method for blood collection at large slaughter establishments with a high kill capacity.

Recent regulations regarding importation of pork products adopted by foreign nations have intensified our interest in solving these problems. A rapid expansion of the swine brucellosis program is imperative if the pork and pork products overseas market is to be protected. State laws and regulations will need revision in most States to provide the necessary framework for administering such a program and should be reviewed for possible amendment.

Surveys, pilot programs, and research projects on the major problems affecting a swine brucellosis surveillance program have been conducted and are to be continued to supplement the activity on swine brucellosis eradication.

VACCINATION

The serologic and bacteriologic findings resulting from problem herd investigations, the marked reduction of brucellosis in most certified areas, and the continued improvement in the surveillance testing procedures have resulted in deemphasizing calf vaccination. This policy is not universal, however, because in all areas where the incidence of brucellosis remains relatively high or the exposure potential remains great from contact with surrounding noncertified areas, vaccination is urged and encouraged.

The deemphasis on vaccination will not have an immediate impact in any area but should eventually lead to an essentially nonvaccinated population in free areas. This is an obligation on the administrators of the brucellosis program to eliminate the losses and costs of brucellosis including vaccination to the livestock industry. Certainly, vaccination on a private basis is not prohibited; but the number of herds needing this protection afforded by vaccination in most modified-certified States represents only a small fraction of the total.

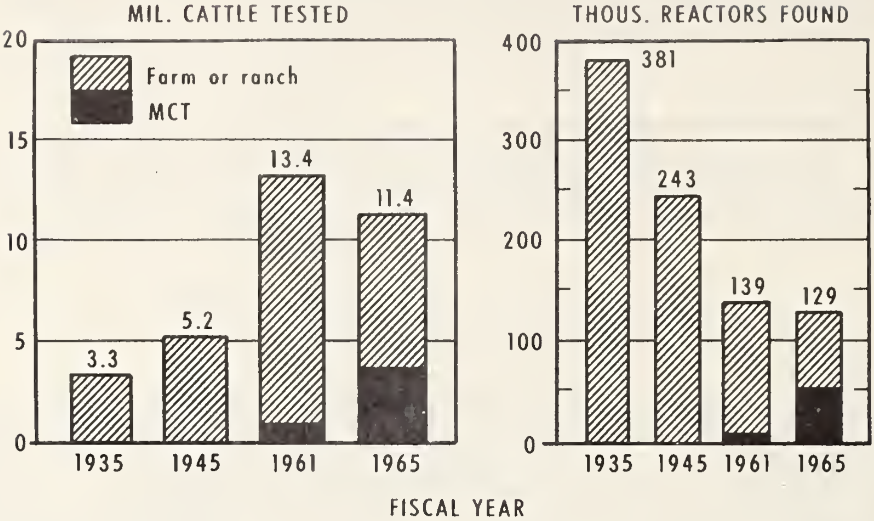
COOPERATIVE BRUCELLOSIS ERADICATION PROGRAM DATA

Activities	Calendar Year		Percent Change for 1965[1]
	1964	1965	
Blood Tests:			
Herds-lots[2]	1,846,960	2,036,446	+10.3
Reactor herds-lots[2]	60,799	53,017	-12.8
Percent	3.3	2.6	(-0.7)
Cattle tested	11,601,077	12,045,506	+3.8
Reactor cattle	134,478	126,209	-6.1
Percent	1.16	1.05	(-0.11)
Ring Test:			
Herd tests	1,815,644	1,811,259	-0.3
Suspicious herd tests	16,874	14,759	-12.6
Percent	0.9	0.8	(-0.1)
Vaccinations	7,154,257	6,903,780	-3.5
Certification of counties modified-certified:			
New and reinstated	76	96	--
Removed	8	1	--
Total	2,343	2,212	--
Certified Brucellosis-Free:			
New	104	256	--
Total	336	562	--
Total certified counties	2,679	2,774	--

[1] ( ) indicates percent difference.
[2] Tennessee MCT lots omitted.

BRUCELLOSIS ERADICATION

BLOOD TESTING: CATTLE



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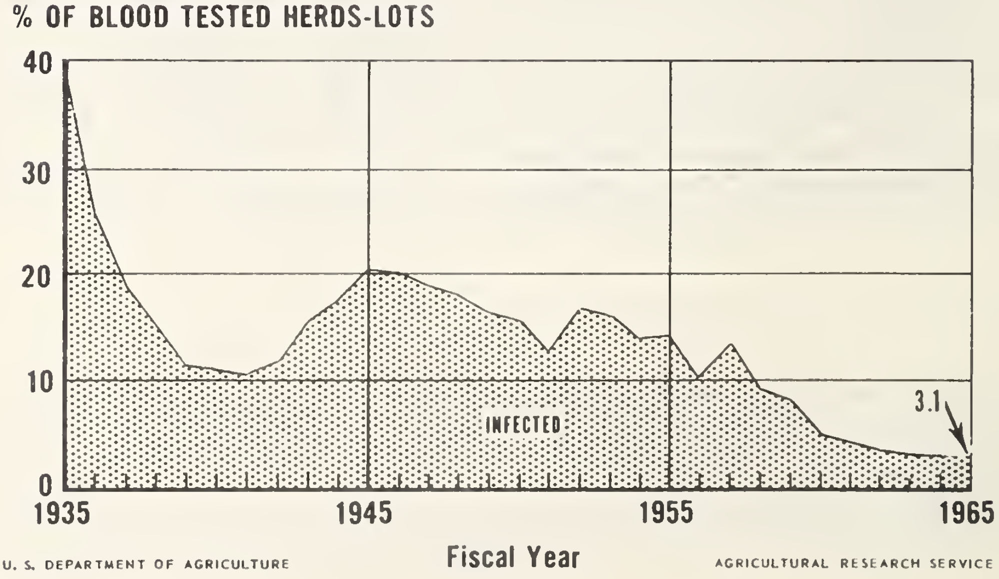
BRUCELLOSIS ERADICATION

BLOOD TESTING: HERDS-LOTS



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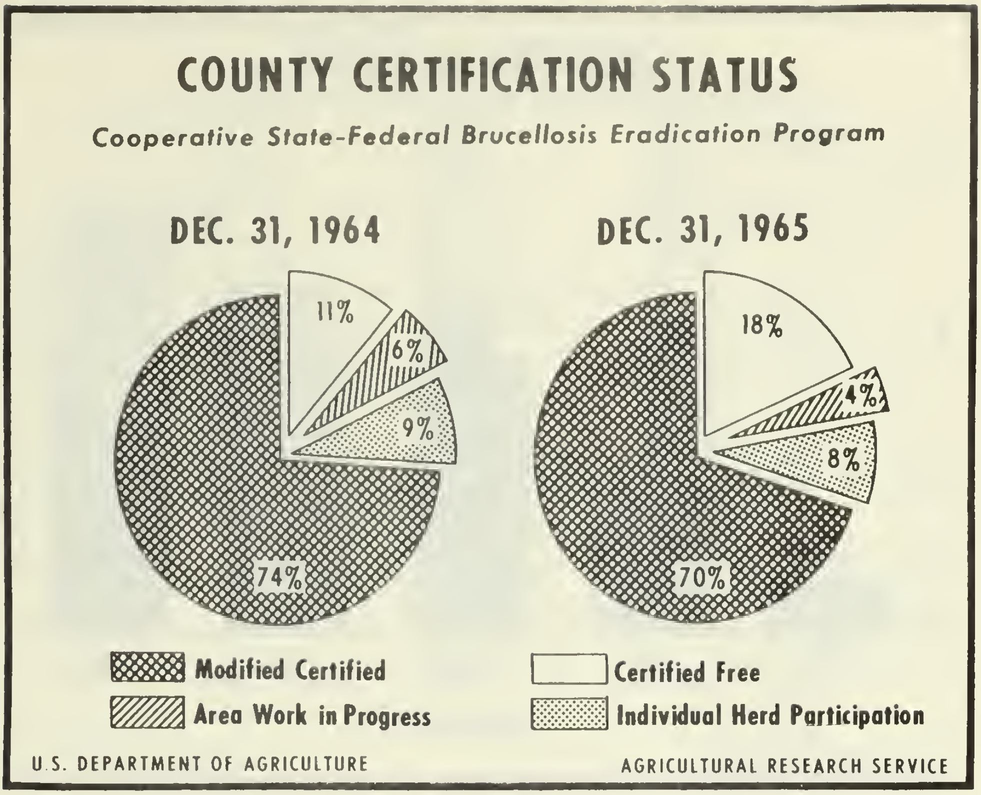
COUNTY CERTIFICATION STATUS
Cooperative State-Federal Brucellosis Eradication Program
DEC. 31, 1964
11%
6%
9%
74%
DEC. 31, 1965
18%
4%
8%
70%
Modified Certified
Area Work in Progress
Certified Free
Individual Herd Participation
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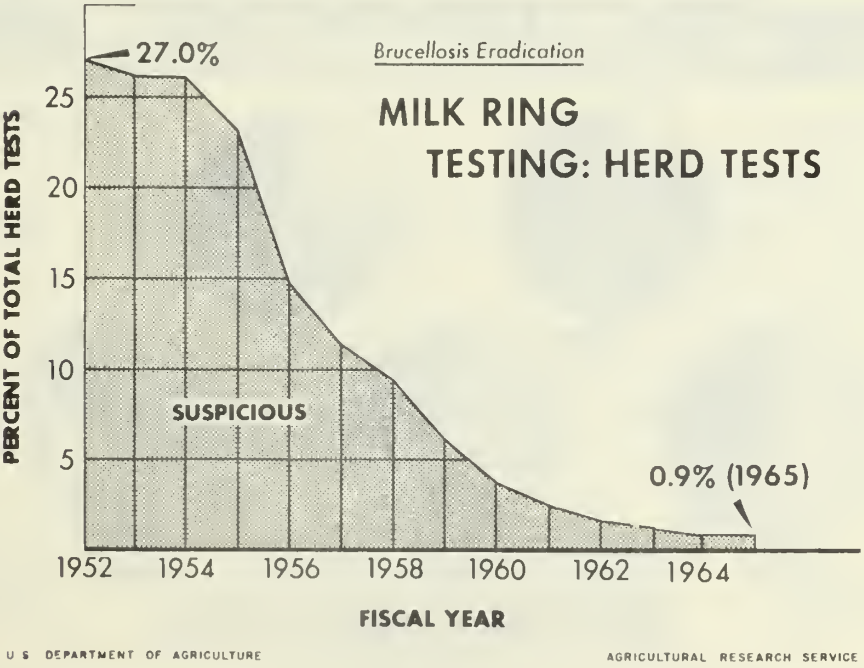
Brucellosis Eradication
MILK RING TESTING: HERD TESTS
27.0%
25
20
15
10
5
SUSPICIOUS
0.9% (1965)
PERCENT OF TOTAL HERD TESTS
1952
1954
1956
1958
1960
1962
1964
FISCAL YEAR
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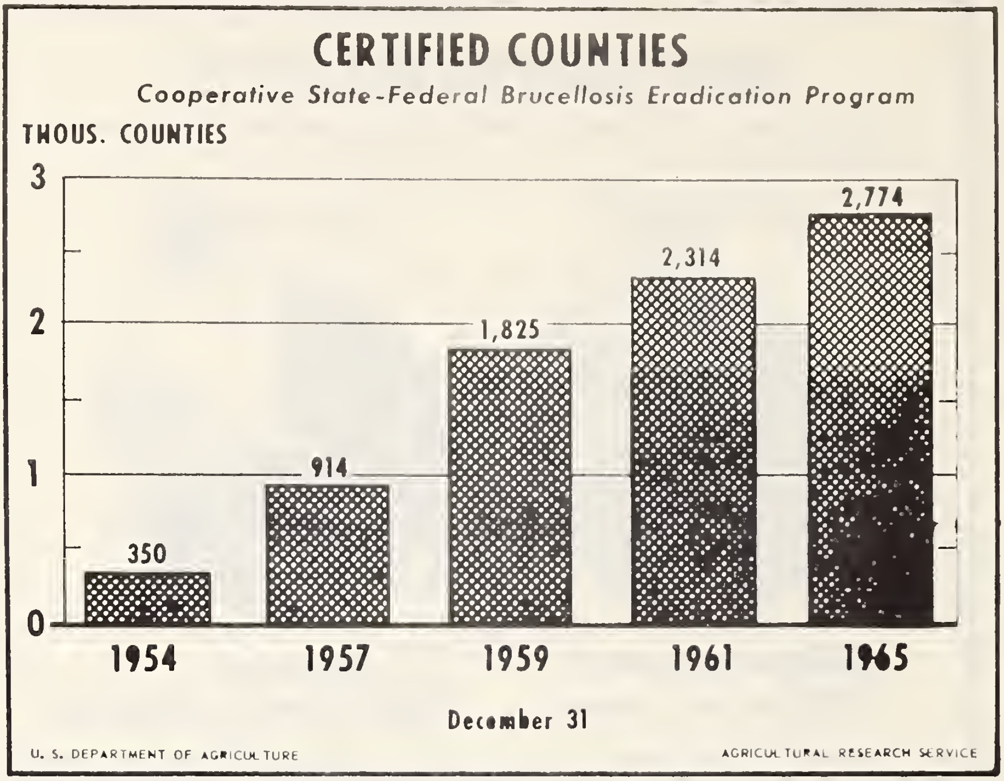
AGRICULTURAL RESEARCH SERVICE


CERTIFIED COUNTIES
Cooperative State-Federal Brucellosis Eradication Program
THOUS. COUNTIES
3
2
1
0
350
914
1,825
2,314
2,774
1954
1957
1959
1961
1965
December 31
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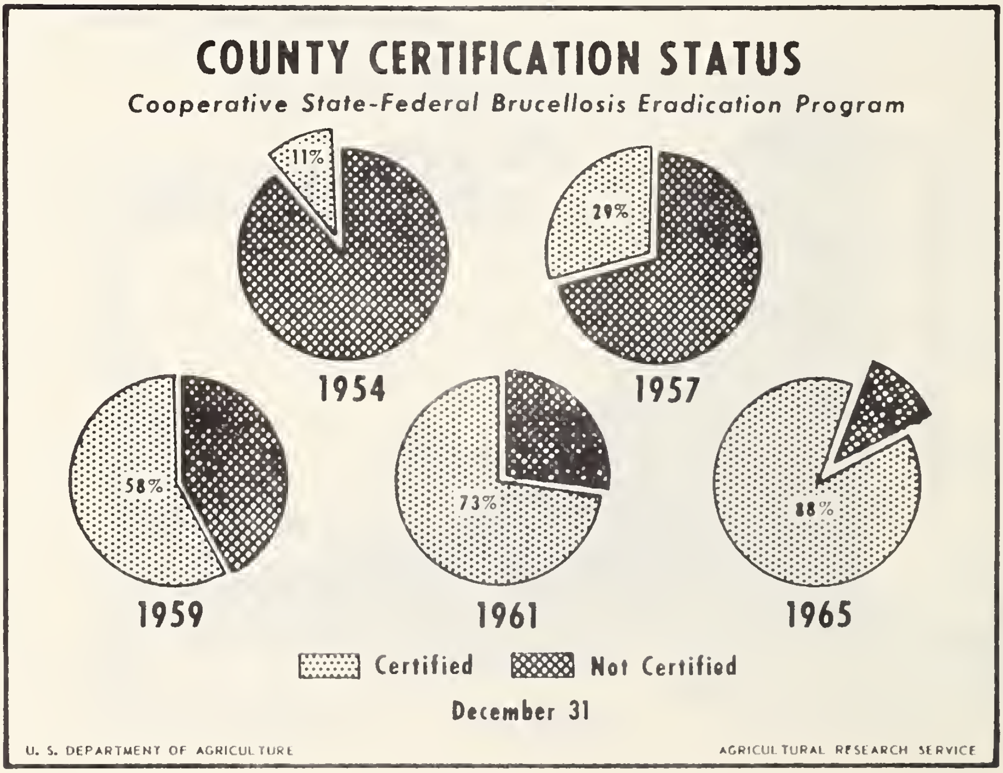
COUNTY CERTIFICATION STATUS
Cooperative State-Federal Brucellosis Eradication Program
11%
1954
29%
1957
58%
1959
73%
1961
88%
1965
Certified
Not Certified
December 31
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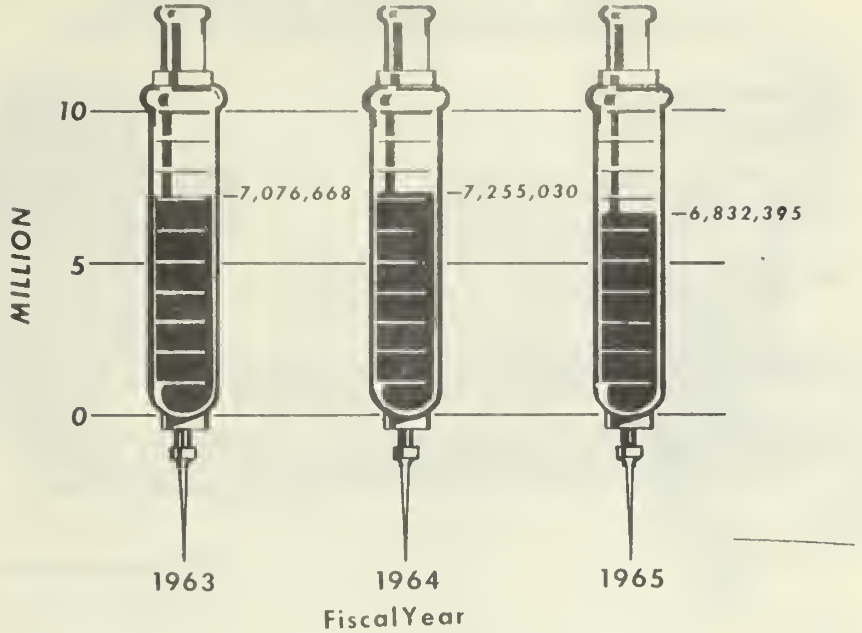
BRUCELLOSIS ERADICATION

CALVES VACCINATED



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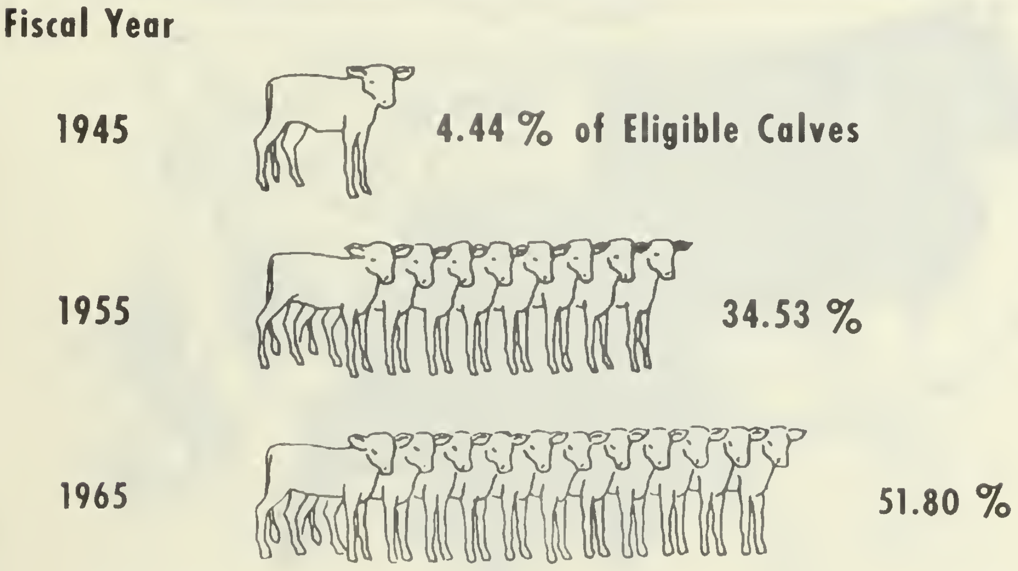
Agricultural Research Service

BRUCELLOSIS ERADICATION

OFFICIAL CALF VACCINATIONS



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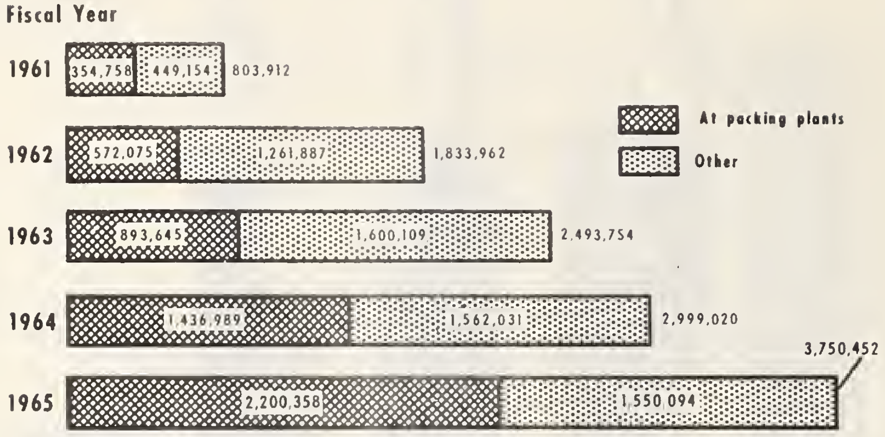
MARKET CATTLE TESTING PROGRAM

Cows Blood Tested



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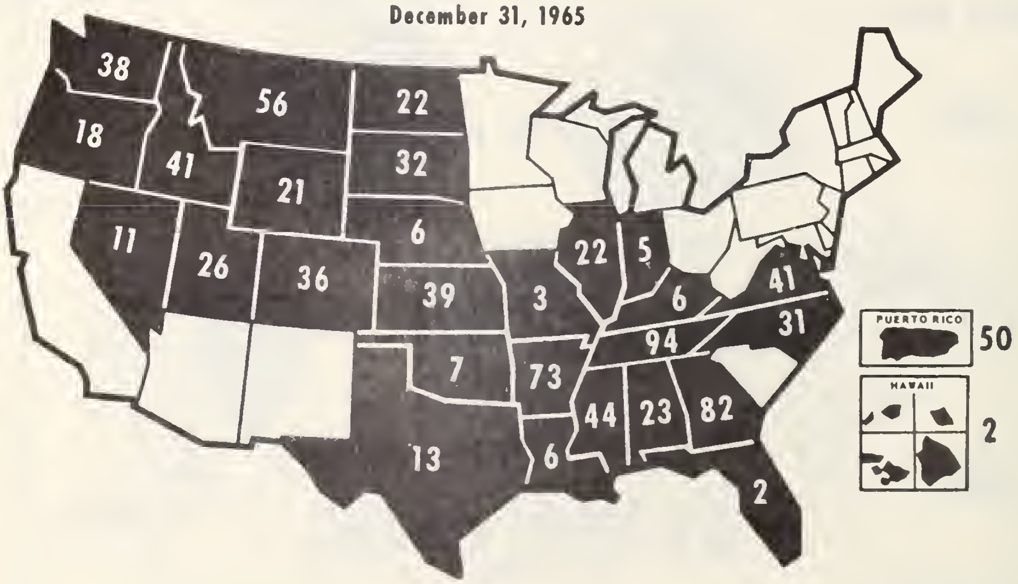
MCT USED TO CERTIFY COUNTIES IN 28 STATES AND PUERTO RICO

December 31, 1965



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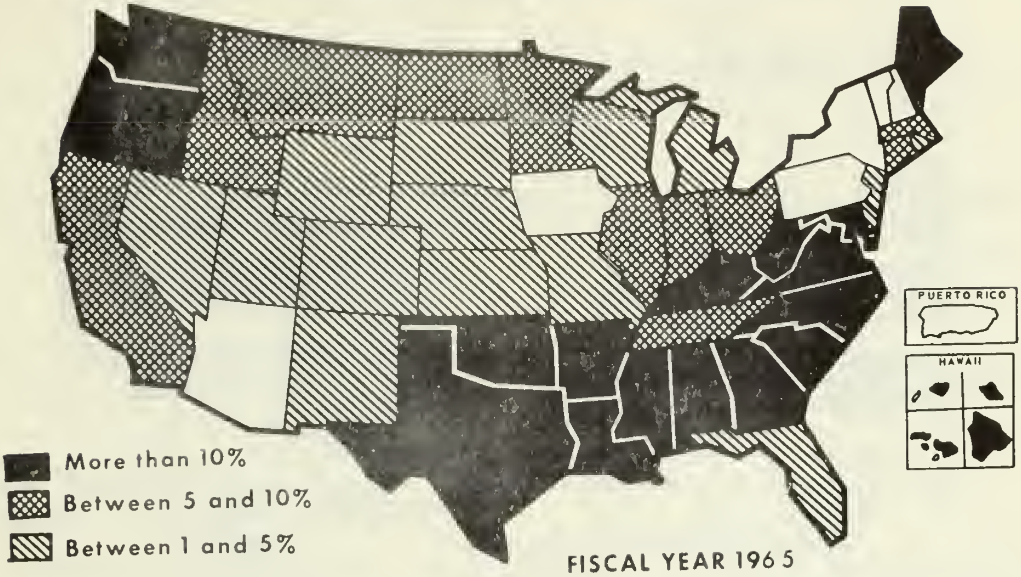
PERCENT OF ADULT COW POPULATION MARKET CATTLE TESTED FOR BRUCELLOSIS



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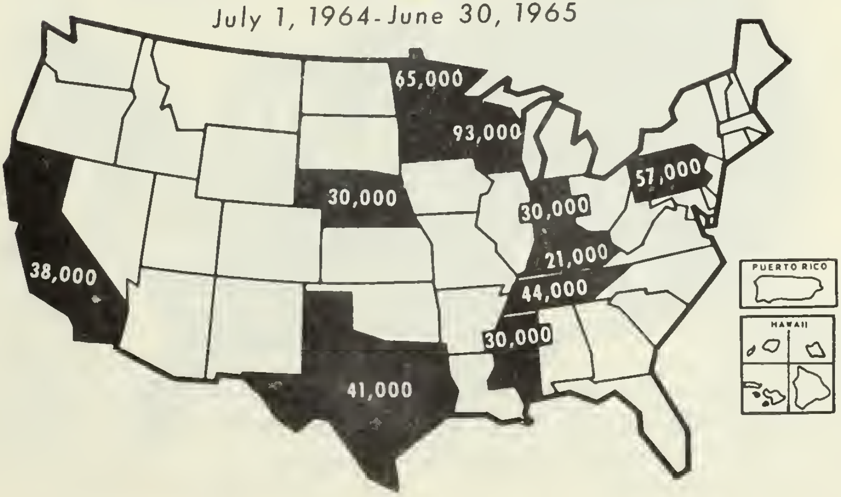
STATES TESTING MORE THAN 20,000 COWS FROM OTHER STATES

July 1, 1964-June 30, 1965



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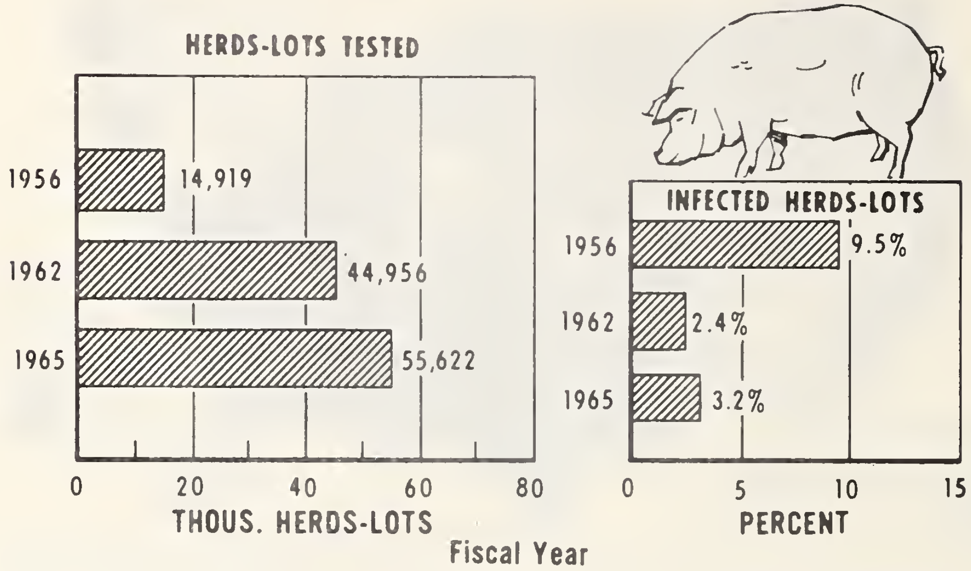
BLOOD TESTING: SWINE



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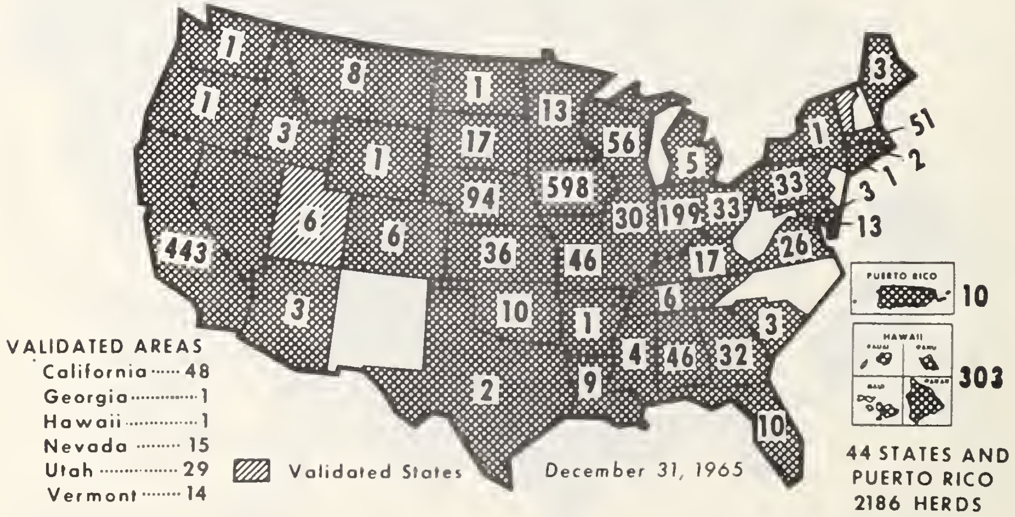
States with Validated Brucellosis-Free Swine Herds



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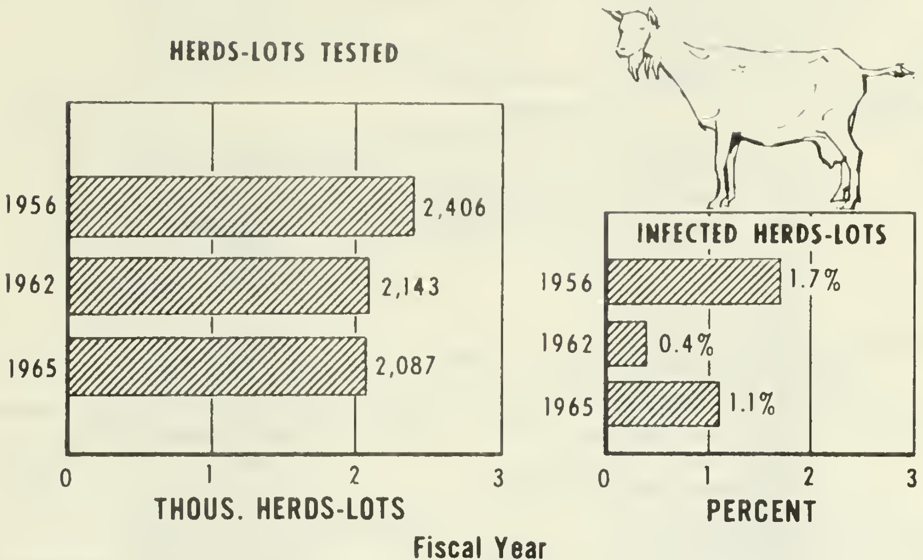
BLOOD TESTING: GOATS



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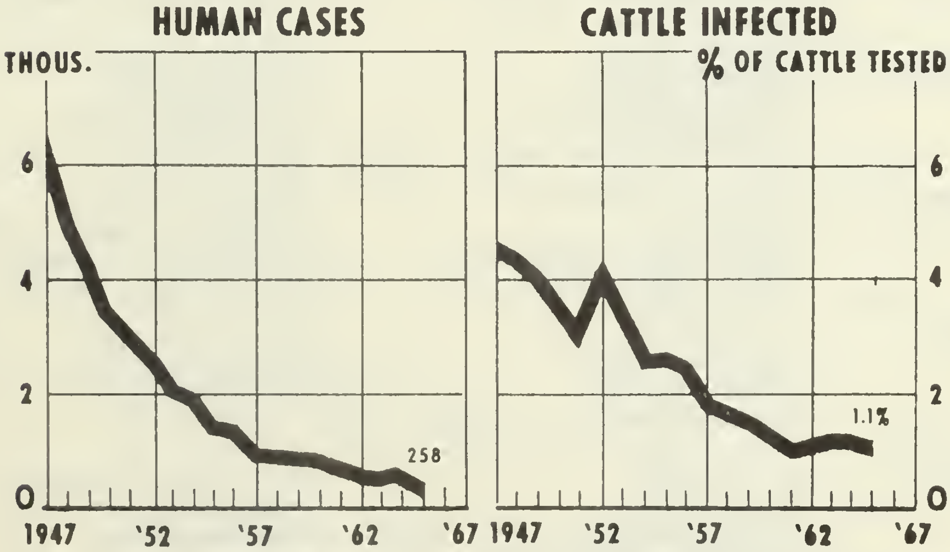
BRUCELLOSIS ERADICATION

BRUCELLOSIS-UNDULANT FEVER



**Based on blood tests only*

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE

A brief resume of the brucellosis activities in each State is presented for your information. If more detailed information on the brucellosis eradication program for an individual State is desired it is suggested that the Veterinarian in Charge, Animal Disease Eradication Division or the State Official in Charge of the animal disease program as listed below be contacted.

State, Territory, or Country	Federal Veterinarian in Charge	State Official
Alabama	B. N. Lauderdale 401 New Post Office Bldg. Montgomery, Ala. 36104	John G. Milligan P.O. Box 220 Montgomery, Ala.
Alaska	Harold D. White Rooms 60-61 Federal Bldg. Anchorage, Alaska 99501	Fred S. Honsinger P.O. Box 2473 Juneau, Alaska
Arizona	E. R. Mackery Post Office Box 7397 4004 North 7th St. Phoenix, Ariz. 85011	William M. Thompson 344 Capitol Bldg. Phoenix, Ariz. 85007
Arkansas	Paul Becton Post Office Box 3548 Room 5506, Federal Bldg. Little Rock, Ark. 72203	R. M. Thomas State Police Headquarters Ground P.O. Box 2821 Little Rock, Ark. 72203
California	J. H. Wommack Room 4506 650 Capitol Ave. Sacramento, Calif. 95814	H. G. Wixom, Chief Division of Animal Industry 1220 N Street Sacramento, Calif. 95814
Colorado	E. S. Cox 13037 Federal Bldg. U.S. Courthouse 1961 Stout St. Denver, Colo. 80202	William C. Tobin Room 420 1525 Sherman St. Denver, Colo. 80202
Connecticut	Walter Ferrall Room 258-262 State Office Bldg. Hartford, Conn. 06115	Jean V. Smith Room 287 State Office Bldg. Hartford, Conn. 06115
Delaware	D. F. Schwindamin Room 3 Agricultural Annex Bldg. Dover, Del. 19901	Robert L. Ricker Delaware Dept. of Poultry and Animal Health Dover, Del. 19901
Florida	J. B. Healy P.O. Box 4129 240 P.O. Bldg. Jacksonville, Fla. 32201	C. L. Campbell P.O. Box 1509 Tallahassee, Fla.
Georgia	C. J. Mikel Room 410 Bona Allen Bldg. 133 Luckie St., N.W. Atlanta, Ga. 30303	O. D. Dye, Director Veterinary Division Capitol Square Atlanta, Ga. 30334

State, Territory, or Country	Federal Veterinarian in Charge	State Official
Hawaii	E. G. Ongert 819-825 Keeaumoki St. Room 304 & 305 Honolulu, Hawaii 96814	Ernest H. Willers State Veterinarian P.O. Box 5425 Pawaa Station Honolulu, Hawaii
Idaho	A. P. Schneider, Director Idaho State-Federal Cooperative Livestock Regulatory Programs 716 Idaho St. Boise, Idaho 83702	A. P. Schneider (same)
Illinois	Milo Johnson P.O. Box 2149 100½ East Washington St. Springfield, Ill. 62701	Paul B. Doby, Superintendent Emmerson Bldg. State Fair Grounds Springfield, Ill. 62701
Indiana	L. R. Barnes 311 W. Washington St. Room 210 Indianapolis, Ind. 46204	David L. Smith 801 St. Office Bldg. 100 N. Senate Ave. Indianapolis, Ind. 46204
Iowa (Ames)	C. D. Van Houweling Assistant Director National Animal Disease Lab. P.O. Box 70 Ames, Iowa 50011	(None)
Iowa	G. E. Blake 1115 Grand Avenue Des Moines, Iowa 50309	M. E. Pomeroy, Chief Div. of Animal Industry and State Veterinarian State House Des Moines, Iowa 50319
Kansas	D. O. Manley P.O. Box 1518 Room 700 Capitol Federal Bldg. Topeka, Kans. 66601	A. G. Pickett Livestock Sanitary Commissioner State Office Bldg. Topeka, Kans. 66612
Kentucky	L. T. Fisher P.O. Box 399 105½ St. Clair St. Frankfort, Ky.	R. J. Henshaw, Acting State Veterinarian Capitol Annex Frankfort, Ky. 40601
Louisiana	A. G. Pass 1755 Florida Street 302 Audubon Bldg. Baton Rouge, La. 70821	F. B. Wheeler P.O. Box 4003 Capitol Station Baton Rouge, La. 70821
Maine	C. W. Wilder 204 Post Office Bldg. Augusta, Maine 04330	Francis G. Buzzell Director State Office Annex Augusta, Maine 04331

State, Territory, or Country	Federal Veterinarian in Charge	State Official
Maryland	J. K. Atwell 510 Hartwick Bldg. 4321 Hartwick Road College Park, Md. 20740	T. A. Ladson, Director Md. Livestock Sanitary Service, Symons Hall Univ. of Maryland College Park, Md. 20740
Massachusetts	E. R. Coon 802 Customhouse Bldg. Boston, Mass. 02109	Edward M. Dwyer, Director Livestock Disease Control 41 Tremont St. Boston, Mass. 02108
Michigan	C. L. Hendee Sixth Floor Lewis Cass Bldg. Lansing, Mich. 48913	John F. Quinn, St. Veterinarian 6th Floor, Lewis Cass Bldg. Lansing, Mich. 48913
Minnesota	D. F. Werring 555 Wabasha St. St. Paul, Minn. 55102	J. G. Flint, Secretary and Executive Officer 1246 University Ave. St. Paul, Minn. 55104
Mississippi	L. J. Pate P.O. Box 1120 590 Milner Bldg. Corner Lamar and Pearl St. Jackson, Miss. 39205	Vernon D. Chadwick P.O. Box 916 Jackson, Miss. 39205
Missouri	L. F. Van Gorder P.O. Box 627 203-205 P.O. Bldg. Jefferson City, Mo. 65102	G. C. Stiles, St. Veterinarian P.O. Box 630 Jefferson Bldg. 13th Floor Jefferson City, Mo. 65102
Montana	J. H. Slack P.O. Box 917 Steamboat Block 616 Helena Ave. Helena, Mont. 59601	John W. Safford, State Veterinary Surgeon Livestock Bldg. Capitol Station Helena, Mont. 59601
Nebraska	E. H. Nordstrom P.O. Box 1866 303 Farmers Mutual Ins. Bldg. 1220 "J" St. Lincoln, Nebr. 68501	Lee A. Wilcox Room 1124-26 State Capitol Bldg. Lincoln, Nebr. 68501
Nevada	E. M. Joneschild 1395 Haskell St. Suite B Reno, Nev. 89502	John L. O'Harra, Director P.O. Box 1209 Reno, Nev. 89502
New Hampshire	C. W. Wilder 204 Post Office Bldg. Augusta, Maine 04330	Clarence B. Dearborn Room 102 State House Annex Concord, N.H. 00331

State, Territory, or Country	Federal Veterinarian in Charge	State Official
New Jersey	R. L. Alkire P.O. Box 938 238 P.O. Bldg. Trenton, N.J. 08605	E. L. Brower John Fitch Plaza South Warren St. P.O. Box 1888 Trenton, N.J. 08605
New Mexico	R. L. Pyles P.O. Box 464 4010 New Fed. Office Bldg. 517 Gold Avenue, S.W. Albuquerque, N. Mex. 87103	J. E. Kleck Box 1296 113 3rd St., S.W. Albuquerque, N. Mex. 87103
New York	Dale Suplee Building 8 State Campus Albany, N.Y. 12226	Grant S. Kaley, Director Building 8 State Campus Albany, N.Y. 12226
North Carolina	W. W. Harkins 320 Agricultural Bldg. Raleigh, N.C. 27603	H. J. Rollins P.O. Box 670 323 Agricultural Bldg. Raleigh, N.C. 27602
North Dakota	G. W. Spangler Post Office Box 639 220 E. Rosser Avenue Bismarck, N. Dak. 58502	Dean E. Flagg State Capitol Bldg. Bismarck, N. Dak. 58502
Ohio	Paul H. Kramer 438 Old Post Office Bldg. 3rd and State Sts. Columbus, Ohio 43215	Harry E. Goldstein Room 720 Ohio Dept. Bldg. 65 S. Front St. Columbus, Ohio 43215
Oklahoma	L. N. Miller 5411 New Federal Bldg. 200 Northwest 4 Oklahoma City, Okla. 73102	J. H. Brashear 122 State Capitol Bldg. Oklahoma City, Okla. 73102
Oregon	O. J. Halverson 1178 Chemeketa, N.E. Salem, Oreg. 97310	Glen B. Rea, Chief Veterinary Division Oregon Dept. Agr. Salem, Oreg. 97310
Pennsylvania	R. W. Boone P.O. Box 2065 2301 N. Cameron St. Harrisburg, Pa. 17108	J. C. Shook, Director Bureau of Animal Industry Room 408 2301 N. Cameron St. Harrisburg, Pa. 17108
Rhode Island	E. R. Coon 802 Customhouse Bldg. Boston, Mass. 02109	T. J. Grennan, Jr., Chief Division Animal and Dairy Industry 365 State Office Bldg. Providence, R. I.

State, Territory, or Country	Federal Veterinarian in Charge	State Official
South Carolina	C. E. Boyd, Director State-Federal Livestock Dis. Eradication Program P.O. Box 1771 Columbia, S.C. 29202	C. E. Boyd (same)
South Dakota	H. P. Honstead P.O. Box 758 U.S. Courthouse & Post Office Bldg. Pierre, S. Dak. 57501	M. D. Mitchell, Executive Secretary State Office Bldg. Pierre, S. Dak. 57501
Tennessee	W. W. Bird P.O. Box 909 548 U.S. Courthouse Nashville, Tenn. 37202	C. E. Kord P.O. Box 9039 Melrose Sta. Nashville, Tenn. 37202
Texas	J. L. Wilbur, Jr. 3rd Floor Western Republic Life Bldg. Austin, Tex. 78701	S. B. Walker Texas Animal Health Comm. New St. Office Bldg. Austin, Tex. 78701
Utah	J. E. Rasmussen P.O. Box 11429 5237 Federal Bldg. 125 S. State St. Salt Lake City, Utah 84111	Hendrik Versluis Room 412-A State Capitol Bldg. Salt Lake City, Utah 84114
Vermont	C. O. Finch State Agricultural Bldg. Montpelier, Vt. 05602	A. E. Janawicz, Director Vermont Livestock Division Dept. of Agriculture Montpelier, Vt. 05602
Virginia	E. C. Roukema 203 North Governor St. Room 313 Richmond, Va. 23219	W. L. Bendix, Director 203 North Governor St. Richmond, Va. 23219
Washington	H. C. King Post Office Box 87 205 Union Ave. Bldg. Olympia, Wash. 98501	D. A. McGill, Supervisor Div. of Animal Industry P.O. Box 120 Olympia, Wash. 98501
West Virginia	L. G. Berg 3404 Federal Office Bldg. 500 Quarrier St. Charleston, W. Va. 25301	T. P. Siburt, Director Room E 102 Capitol Bldg. Charleston, W. Va. 25301
Wisconsin	A. A. Erdmann, Chief Vet. State-Federal Cooperative Program Hill Farms State Office Bldg. 4802 Sheboygan Ave. Madison, Wis. 53702	A. A. Erdmann (same)

State, Territory, or Country	Federal Veterinarian in Charge	State Official
Wyoming	W. M. Reynolds P.O. Box 825 2120 Capitol Ave. Room 8007 Cheyenne, Wyo. 82001	R. I. Port State Office Bldg. Cheyenne, Wyo. 82001
Mexico	R. S. Sharman, Co-Director Mexico-U.S. Commission for Prevention of Foot and Mouth Disease Apartado Postal M 2890 Mexico City, D. F., Mexico	(None)
Puerto Rico	F. E. Henderson P.O. Box 10149 Martinez and Sand Bldg. R. H. Todd Avenue, Corner of Carmen Santurce, Puerto Rico 00908	Miguel A. Hernandez Agosto Sec. of Agriculture and Commerce P. R. Dept. of Agriculture and Commerce San Juan, Puerto Rico

ALABAMA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	60,574	65,797	+8.6
Reactor Herds-Lots	5,200	4,804	-7.7
Percent	8.6	7.3	(-1.3)
Cattle Tested	445,922	480,734	+7.8
Reactor Cattle	13,368	12,014	-10.2
Percent	3.0	2.5	(-0.5)
Ring Tests			
Herd Tests	4,466	4,289	-4.0
Suspicious Herd Tests	104	117	+12.5
Percent	2.3	2.7	(+0.4)
Vaccinations (Calfhood)	115,770	125,992	+8.8
Certification of Counties			
Modified Certified			
New	10	6	
Total	54	60	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	54	60	

( ) % Difference

During 1965 considerable progress was made by increasing the percentage of cattle backtagged at stockyards cooperating under the backtagging program. There is a need to expand this service to the remaining stockyards. This will be accomplished when the blood collection procedures at Federal and municipal slaughtering plants are adequate to insure a good return. At present, stockyards not using the backtag are blood testing all cattle over 30 months of age that leave the yards for any purpose.

The participation of non-Federal slaughtering establishments in the collection of blood samples from backtagged cattle is constantly improving. The attitudes of the veterinary inspectors and the management in these plants have been favorable following their familiarity with the purpose and importance of the MCT program.

Tracing of reactor cattle, detected under the MCT program, is improving, primarily as a result of better dealer records. This has permitted a greater number of reactors handled by dealers to be traced to the herd of origin.

Excellent progress has been made in counties heavily populated with cattle. This is largely due to an excellent educational program and to seasoned employees who worked with people opposing the brucellosis program a few years ago. There is no organized opposition to the program in Alabama at this time.

There is a need for a satisfactory identification system of slaughter boars and sows so that a market swine testing program for swine brucellosis can begin.

Alabama is expected to achieve modified certified status in 1966. The development of a capability to conduct epidemiological investigation on problem herds will be needed as the State progresses toward certified-free status.

There is no plan at present to either emphasize or deemphasize the calf vaccination program.

ALASKA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	52	101	+94.2
Reactor Herds-Lots	0	1	+100.0
Percent	0.0	1.0	(+1.0)
Cattle Tested	852	1,154	+35.4
Reactor Cattle	0	1	+100.0
Percent	0.0	0.1	(+0.1)
Ring Tests			
Herd Tests	50	39	-22.0
Suspicious Herd Tests	0	0	0.0
Percent	0.0	0.0	(0.0)
Vaccinations (Calfhood)	155	159	+2.6
Certification of Counties			
Modified Certified			
New	0	0	
Total	0	0	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	0	0	

( ) % Difference

On the basis of cattle tested during the last several years, bovine brucellosis is not prevalent in this area. No difficulty is anticipated to qualify Alaska as a certified area when the initial testing of all herds in the State can be accomplished. One reactor was disclosed in Alaska in 1965, but no detailed information is available regarding this animal. This was the first reactor in cattle in Alaska since 1960.

The brucellosis problem, however, is recognized primarily as affecting caribou, and a cooperative research study with the Arctic Health Research Center and the State Fish and Game Division is in progress. The serologic survey of caribou during calendar year 1965 did not reveal any reactors, but the number of animals tested was too low to be of great significance.

ARIZONA

Activities	Calendar Year		Percent Change
	1964	1965	for 1965
Blood Tests			
Herds-Lots	1,199	1,442	+20.3
Reactor Herds-Lots	41	25	-39.1
Percent	3.4	1.7	(-1.7)
Cattle Tested	33,317	44,833	+34.5
Reactor Cattle	109	117	+7.3
Percent	0.3	0.3	(0.0)
Ring Tests			
Herd Tests	861	1,025	+19.0
Suspicious Herd Tests	13	17	+30.8
Percent	1.5	1.7	(+0.2)
Vaccinations (Calfhood)	13,666	11,866	-13.2
Certification of Counties			
Modified Certified			
New	0	0	
Total	14	13	
Certified Brucellosis-Free			
New	[1] 0	[1] 1	
Total	0	1	
Total Certified Counties	14	14	

( ) % Difference

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[1] Five Indian Reservations qualified as Certified Brucellosis-Free Areas.

During 1965, one county and one Indian Reservation were certified free. Testing for certified-free status was initiated in five additional counties and has progressed more rapidly than anticipated. All of these counties will be certified free before July 1966.

The most significant advance in the brucellosis program during 1965 was the inauguration of the MCT program. Many Arizona auctions are using the official State-Federal backtags as sales ring tags, thus making it possible to utilize the MCT program in overall identification for tuberculosis.

During 1965 a detailed study of the larger dairy herds was made. As a result of the loss in sensitivity of the BRT, samples were collected from each tank where multiple tanks were used. In other herds it was necessary to collect segmented samples from each tank where multiple tanks were used.

Annual vaccination of buffalo calves at the Raymond Ranch--the one infected buffalo herd in Arizona--was continued. A complete blood test of this herd is scheduled for January 1966. Limited blood samples collected from this herd during 1965 indicate that infection has been drastically reduced.

Epidemiological studies, with extensive use of supplemental tests, continued in brucellosis problem herds and in range herds disclosing single reactors in otherwise negative herds. The number of problem herds encountered in 1965 was considerably less than in 1964.

Further refinements in the mechanics of the MCT, especially in the handling of program records and the backtagging of cattle at ranches for direct slaughter in other States are indicated and will be placed in effect in 1966. More extensive testing of swine is also indicated; improvement in this area in 1966 is anticipated.

Vaccination of female dairy calves is being continued at about the same rate. Vaccination of beef-type calves is not routinely practiced in Arizona due to the extremely low incidence of brucellosis infection among range herds.

ARKANSAS

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	75,659	89,769	+18.6
Reactor Herds-Lots	1,801	1,939	+7.7
Percent	2.4	2.2	(-0.2)
Cattle Tested	243,084	275,965	+13.5
Reactor Cattle	3,477	3,471	-0.2
Percent	1.4	1.3	(-0.1)
Ring Tests			
Herd Tests	14,367	14,648	+2.1
Suspicious Herd Tests	197	132	-33.0
Percent	1.4	0.9	(-0.5)
Vaccinations (Calfhood)	137,577	124,356	-9.7
Certification of Counties			
Modified Certified			
New and Reinstated	0	1	
Removed	0	-1	
Total	75	68	
Certified Brucellosis-Free			
New	0	7	
Total	0	7	
Total Certified Counties	75	75	

( ) % Difference

A marked increase in the number of animals handled at the livestock markets was noted during 1965. Arkansas law requires that all eligible animals at these markets be tested without cost to the owner. However, it was necessary to discontinue fee-basis testing of dairy animals and eligible cattle of uncertain origin during 1965. While the costs associated with the Arkansas MCT program were fairly high, the excellent results of the percent return and the tracing efficiency adequately compensated for this expense.

Problem herd work has been effective in several herds and is being gradually expanded to handle an increasing number of herds. As the program enlarges its scope, even greater returns are expected.

The number of newly infected herds disclosed continues to be of concern. During 1965, an average of nearly one new infected herd was found per day. This rate has been reduced during the year, and it is hoped that this trend continues. An epidemiological investigation of each newly infected herd is conducted to determine, if possible, the source of the infection. The information gained has been extremely useful in reducing the potential exposure of additional herds.

Vaccination has decreased prematurely in Arkansas. The relatively high incidence of brucellosis in surrounding areas provides a source for potential exposure in Arkansas. The source of infection in a large number of the reactor herds has been traced to out-of-State points.

Swine brucellosis does not appear to be of any significant importance as determined by surveys conducted thus far. As more counties start working toward free status, this aspect will be given further consideration.

CALIFORNIA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	24,384	25,903	+6.2
Reactor Herds-Lots	841	554	-34.2
Percent	3.4	2.1	(-1.3)
Cattle Tested	326,125	254,389	-22.0
Reactor Cattle	1,669	1,102	-34.0
Percent	0.5	0.4	(-0.1)
Ring Tests			
Herd Tests	23,246	18,429	-20.8
Suspicious Herd Tests	731	536	-26.7
Percent	3.1	2.9	(-0.2)
Vaccinations (Calfhood)	421,946	424,140	+0.5
Certification of Counties			
Modified Certified			
New	0	0	
Total	50	40	
Certified Brucellosis-Free			
New	6	10	
Total	8	18	
Total Certified Counties	58	58	

( ) % Difference

The MCT program continues to increase in volume. It is estimated that 10 percent of the adult beef population are tested annually by this program. This growth reflects expanded efforts of samples collected from nontagged animals at the slaughterhouse.

The BRT program is now scheduled for three pickups each year. Nearly one-half of the BRT man-hours are spent in segmenting large herds in such a manner that each milk sample represents less than 300 cows. If the present effort to adjust the BRT sensitivity for use in these herds is successful, it will be possible to make quarterly collections on all dairies by using existing manpower.

The vaccination program continues mandatory for dairy heifers and voluntary for beef heifers. Male calves are not vaccinated. Beef vaccinations continue to increase and now account for 48 percent of the total. Emphasis is being placed on younger ages.

The problem herd program is of great significance in final eradication of the disease. There is a need for training of all field personnel in application of epidemiological procedures.

Definite needs are recognized in the area validation program for swine brucellosis. A more definitive test is needed to resolve two problems. Large herds of several hundred sows, revealing a single animal with titer of complete at 1:100, have not been verified to have infection by bacteriologic examination. Some herds are showing a high percentage (20 to 50) of titered animals but none at the 1:100 range or higher. These numerous titers create doubt as to herd status.

The 18-month testing period for validating areas has been another difficulty encountered in California. This time element is critical in area validation and revalidation, since cleaning up infected herds under the plans offered in Uniform Methods and Rules can seldom be accomplished in less than a year, if an owner wishes to validate the herd in question.

COLORADO

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	11,410	12,370	+8.4
Reactor Herds-Lots	459	241	-47.5
Percent	4.0	1.9	(-2.1)
Cattle Tested	175,618	163,012	-7.2
Reactor Cattle	1,168	483	-59.7
Percent	0.7	0.3	(-0.4)
Ring Tests			
Herd Tests	10,566	8,095	-23.4
Suspicious Herd Tests	105	111	5.7
Percent	1.0	1.4	(+0.4)
Vaccinations (Calfhood)	166,002	131,648	-20.7
Certification of Counties			
Modified Certified			
New	4	8	
Total	44	52	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	44	52	

( ) % Difference

The most significant advance in the brucellosis program was the completion of initial certification of several counties and the request by the other counties to be placed under an area testing program. All but two counties are currently participating in the program.

The market cattle testing program has accelerated considerably. Backtags are now being placed on cows at 25 auction markets and 2 public stockyards.

The vaccination program has remained constant and no change has been made in the program.

CONNECTICUT

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	10,141	12,362	+21.9
Reactor Herds-Lots	23	8	-65.3
Percent	0.2	0.1	(-0.1)
Cattle Tested	48,854	59,505	+21.8
Reactor Cattle	30	8	-73.4
Percent	0.06	0.01	(-0.05)
Ring Tests			
Herd Tests	6,457	5,821	-9.9
Suspicious Herd Tests	35	16	-54.3
Percent	0.5	0.3	(-0.2)
Vaccinations (Calfhood)	16,815	14,971	-11.0
Certification of Counties			
Modified Certified			
New	0	0	
Total	2	0	
Certified Brucellosis-Free			
New	1	2	
Total	6	8	
Total Certified Counties	8	8	

( ) % Difference

Connecticut reached certified-free status on January 15, 1965. The procedures which permitted the achievement of this goal are essentially still in effect.

The few changes that occurred during the year include the enactment of a law authorizing the condemnation with indemnity of entire herds that are badly affected with brucellosis.

During 1965, a continued effort was made to reduce the age at which calves are vaccinated. The policy is recommended vaccination between 4 and 6 months of age. A State law was passed in 1965 requiring all female calves to be vaccinated. Nonvaccinated heifers over 9 months of age are restricted to the owner premise until moved for slaughter.

In addition, the existing law regulating movements of cattle into Connecticut was amended to require that cattle 24 months of age and older be negative to the tube sero-agglutination test to qualify for entry.

The market cattle testing program was discontinued on December 31, 1965, to avoid unnecessary duplication of screening procedures. The low percentage of beef cattle in the State did not necessitate the use of this method of surveillance.

DELAWARE

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	1,364	1,265	-7.3
Reactor Herds-Lots	12	9	-25.0
Percent	0.9	0.7	(-0.2)
Cattle Tested	25,994	22,548	-13.3
Reactor Cattle	43	41	-4.7
Percent	0.2	0.2	(0.0)
Ring Tests			
Herd Tests	1,360	1,419	+4.3
Suspicious Herd Tests	5	9	+80.0
Percent	0.4	0.6	(+0.2)
Vaccinations (Calfhood)	3,616	2,961	-18.2
Certification of Counties			
Modified Certified			
New	0	0	
Total	3	3	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	3	3	

( ) % Difference

During 1965, Delaware was in the unenviable position of not having any enforcible regulations due to a court order obtained by an auction market and the resulting opinion of the presiding judge. However, new regulations became effective on January 1, 1966, and compliance has been gratifying.

A backtagging program instituted during December 1965 has enhanced the brucellosis program. No brucellosis problem herds were located in the State. The calf vaccination program is being deemphasized. The program is no longer being promoted and calves are vaccinated only on request.

A program of promoting swine herd validation has begun through personal contact with swine breeders and by advising producers of its importance. The swine owners' interest thus far has been limited as the trend has been toward more purchased feeders.

A statute authorizing the licensing of livestock dealers is needed in Delaware. This action more than any other would bring about the largest improvement in the control of livestock diseases.

FLORIDA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	16,354	25,126	+53.6
Reactor Herds-Lots	1,770	1,809	+2.2
Percent	10.8	7.2	(-3.6)
Cattle Tested	252,071	249,831	-0.9
Reactor Cattle	4,063	3,673	-9.6
Percent	1.6	1.5	(-0.1)
Ring Tests			
Herd Tests	3,935	1,981	-49.7
Suspicious Herd Tests	627	384	-38.8
Percent	15.9	19.4	(+3.5)
Vaccinations (Calfhood)	142,304	139,592	-1.9
Certification of Counties			
Modified Certified			
New	0	0	
Total	30	30	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	30	30	

( ) % Difference

The brucellosis program in Florida was stopped in 1959. During 1964 the cattlemen of Manatee County exhibited an interest in trying to become modified-certified in order to meet the requirements of shipping animals to other States. Area testing began in that County in January 1965. Several other counties showed a similar interest during 1965; but, due to violent opposition, area testing was not possible in any of these counties. The recommendations, which were brought out in the USLSA meeting this past year, have created a renewed interest as well as the changing of minds of some of the opposition to the brucellosis program. In the latter part of 1965 the Florida Cattlemen's Association held meetings in Florida and sent representatives to meet with Animal Health Division concerning the proposed regulations. Several articles have recently appeared in the Florida Cattlemen's Magazine that may stimulate more interest and change the thinking of the opposition to the brucellosis program.

Owing to the fact that only approximately one half of Florida is presently modified-certified, the program concerning problem herds has not been instituted. The dairies in Florida have made remarkable progress in eliminating brucellosis from their herds. They should show even more progress in the future if other counties become modified-certified. Owing to the present status of the brucellosis program in Florida, vaccination is continual. The Florida Cattlemen's Association emphasizes this method as a means of controlling brucellosis. Swine brucellosis does not present a problem in Florida at present. The swine testing would not be a problem if sufficient funds and personnel were available for the job.

GEORGIA

Activities	Calendar Year 1964	1965	Percent Change for 1965
Blood Tests			
Herds-Lots	69,607	47,295	-32.2
Reactor Herds-Lots	1,036	963	-7.0
Percent	1.5	2.0	(+0.5)
Cattle Tested	249,112	242,233	-2.8
Reactor Cattle	2,512	2,747	+9.4
Percent	1.0	1.1	(+0.1)
Ring Tests			
Herd Tests	7,809	7,095	-9.1
Suspicious Herd Tests	129	100	-22.5
Percent	1.7	1.4	(-0.3)
Vaccinations (Calfhood)	52,204	40,290	-22.8
Certification of Counties			
Modified Certified			
New	0	0	
Total	159	159	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	159	159	

( ) % Difference

Georgia had a very active market cattle testing program during 1965. Eligible cattle for the most part have been backtagged at livestock sales establishments, with limited numbers being backtagged at slaughtering plants and in institutional herds prior to slaughter. Return of blood samples by this method has been excellent. During the past year approximately 30 percent of all newly infected herds were disclosed by this system. This phase of the brucellosis program was also helpful in conserving funds and manpower and in giving credit toward recertification of counties.

Calf vaccination is not being promoted. Emphasis on vaccination is limited to infected herds or areas.

The brucellosis epidemiologist has worked with a number of problem herds during 1965. The program has been expanded and has been successful in dealing with herds where the infection has persisted.

Purebred swine owners are encouraged to have their herds validated. During 1965, however, only a limited increase in the number of herds attained this status. Infection has been very limited in herds seeking this status. Several hundred herds are tested annually for brucellosis for purposes other than validation--with very few infected herds disclosed.

The consensus among practicing veterinarians is that swine brucellosis is on the decrease. Most owners of herds disclosing heavy infection choose to liquidate rather than retest, with a followup of cleaning and disinfecting and restocking from validated sources. This may be the significant factor in the apparent decrease of brucellosis detected in swine.

HAWAII

Activities	Calendar Year		Percent Cha
	1964	1965	for 1965
Blood Tests			
Herds-Lots	2,442	2,933	+20.1
Reactor Herds-Lots	72	64	-11.1
Percent	2.9	2.2	(-0.7)
Cattle Tested	32,052	29,726	-7.2
Reactor Cattle	175	96	-45.1
Percent	0.5	0.3	(-0.2)
Ring Tests			
Herd Tests	172	202	+17.4
Suspicious Herd Tests	0	1	
Percent	0.0	0.5	(+0.5)
Vaccinations (Calfhood)	11,290	9,803	-13.2
Certification of Counties			
Modified Certified			
New	2	0	
Total	2	2	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	2	2	

( ) % Difference

No new areas were validated or modified-certified during 1965. The number of known infected dairy herds continues to decrease, leaving the infected range herds for cleanup. These are not rounded up as readily, or as frequently as is desirable.

There has been a decrease in the reactors found through slaughter tests. Hawaii collects blood from all classes of cattle at slaughter for anaplasmosis and for other tests, including brucellosis. No appreciable drop in steers showed brucellosis titers of 1:100 or higher. Many of these come from herds considered to be free of brucellosis. The laboratory has not been able to determine whether or not these reactions are due to some cross agglutination. Apparently, the proportion of these "false-reactors" is no higher than that of breeding cattle reacting at low titer with no infection found on followup test.

Although for several years efforts were made to persuade cattle owners to submit calves for vaccination at lower ages, many cows are still being slaughtered with positive and suspicious titers believed to be due to late vaccination. Many herds in which late vaccination is practiced are known, and the results of the slaughter samples will not represent an accurate herd status for 2 to 3 years. At present there is no plan to deemphasize vaccination. Any elimination of the "alternate" reading on vaccinates in Hawaii now would increase the number of reactors and suspects reported on field testing as well as slaughterhouse testing, with the problems of "false-reactions" far exceeding the benefits of finding infection early.

Swine brucellosis testing is gaining wider acceptance. Testing is now compulsory and is directed towards validation of individual herds. Some herds lose validation by becoming infected; a few herds are able to clean up. Economic conditions are such that most herd owners do not believe they can afford to market all of their stock and start over with clean pigs, although we have established a large pool of validated herds as the source of new breeding swine.

IDAHO

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	67,131	78,448	+16.9
Reactor Herds-Lots	272	242	-11.1
Percent	0.4	0.3	(-0.1)
Cattle Tested	102,917	106,454	+3.4
Reactor Cattle	453	424	-6.4
Percent	0.4	0.4	(0.0)
Ring Tests			
Herd Tests	35,730	31,080	-13.0
Suspicious Herd Tests	319	170	-46.7
Percent	0.9	0.5	(-0.4)
Vaccinations (Calfhood)	171,598	168,349	-1.9
Certification of Counties			
Modified Certified			
New	0	0	
Total	33	20	
Certified Brucellosis-Free			
New	8	13	
Total	11	24	
Total Certified Counties	44	44	

( ) % Difference

Idaho officials feel that the lowering of the age of calf vaccinations to calves of 4 through 8 months of age will have favorable results in reducing the percentage of high titers and will eventually decrease the herds required to be blood tested. This amended regulation also prohibits the vaccination of bull calves.

The State-Federal Brucellosis Laboratory and its personnel moved into the new building about the first of January 1966. The additional space and facilities will permit the increase of the BRT tests from three times a year to four times a year. A full-time trained brucellosis epidemiologist is now assigned to the station, and funds have been designated for the purchase of equipment that will be of advantage in providing more critical studies in this field.

A program for the use of a market cattle salesyard tag, to be applied by the salesyard personnel, is being inaugurated at seven salesyards in the Boise Valley. It is believed that this will result in a reduction in the cost of backtagging, and an increase in the number of market cattle tests.

ILLINOIS

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	26,295	25,345	-3.6
Reactor Herds-Lots	1,063	998	-6.1
Percent	4.0	3.9	(-0.1)
Cattle Tested	241,903	233,637	-3.4
Reactor Cattle	2,893	2,901	+0.3
Percent	1.2	1.2	(0.0)
Ring Tests			
Herd Tests	47,480	54,794	+15.4
Suspicious Herd Tests	371	333	-10.2
Percent	0.8	0.6	(-0.2)
Vaccinations (Calfhood)	126,252	112,599	-10.8
Certification of Counties			
Modified Certified			
New	0	0	
Total	98	96	
Certified Brucellosis-Free			
New	0	2	
Total	0	2	
Total Certified Counties	98	98	

( ) % Difference

The continued development of the MCT program required a reorganization of the records section to permit maximum utilization of the available data. The percent of returns of blood samples collected from backtagged cattle has been running between 70 and 80 percent during the year. The increased number of cattle being identified by backtags at nine additional concentration points is expected to provide valuable assistance on the work toward free status.

New laboratory space was obtained to improve the facilities available for problem herd studies. Additional equipment has been secured to increase the capabilities in this work.

The Bacteriology Department of the School of Veterinary Medicine has cooperated in various phases of these studies. The epidemiologist has trained three field veterinarians to assist in conducting investigations on farms where samples are required for laboratory use.

INDIANA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	40,632	32,900	-19.1
Reactor Herds-Lots	508	484	-4.7
Percent	1.3	1.5	(+0.2)
Cattle Tested	259,871	213,531	-17.8
Reactor Cattle	947	873	-7.8
Percent	0.4	0.4	(0.0)
Ring Tests			
Herd Tests	41,448	52,421	26.5
Suspicious Herd Tests	298	351	+17.7
Percent	0.7	0.7	(0.0)
Vaccinations (Calfhood)	76,403	66,663	-12.7
Certification of Counties			
Modified Certified			
New and Reinstated	0	1	
Removed	1	0	
Total	91	92	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	91	92	

( ) % Difference

The most notable advancement made in Indiana's Brucellosis Program in 1965 was the expansion of the Market Cattle Testing program. As of January 1, 1965, only 1 public stockyard backtagging, and the 11 Federally inspected establishments collecting blood. By the last of December there were 72 markets backtagging and 36 plants collecting blood samples. All but one market in Indiana is presently backtagging. The calendar year 1966 should record a fair estimate of the State's potential since the markets participating in the program in 1965 were only involved for a part of the year. Improvement still needs to be made in the handling of dealer cattle. About 5 percent of non-BRT cows move to slaughter without backtags. Market operators and regulatory personnel have been instructed not to backtag eligible animals, if the herd of origin is not immediately available at the time of backtagging. Many dealers do not provide this information. The State Sanitary Official has been given authority to implement the recordkeeping part of the dealer licensing law. Therefore, it is conceivable that this loophole may be closed at some future date.

Problem herd work practically ceased when the brucellosis epidemiologist was transferred in March 1964. This was revived in the latter part of 1965 when a District Veterinarian received training in brucellosis epidemiology in Minnesota last fall. At present, there are 10 herds that qualify for this type of study. Most of the retesting of infected herds is performed by regulatory veterinarians. The herd infection rate is decreasing and was reduced by 20 percent in 1965. Vaccination is conducted by practicing veterinarians at owner expense; while there are no plans to deemphasize, neither are there any plans to promote vaccination. Swine brucellosis testing continues on a voluntary basis on individual herds at owner expense. Infected herds are quarantined and retested. All breeding animals sold at public sales are required to be blood tested.

IOWA

Activities	Calendar Year		Percent Change for 1965
	1964	1965	
Blood Tests			
Herds-Lots	83,529	105,574	+26.3
Reactor Herds-Lots	4,399	3,088	-29.8
Percent	5.3	2.9	(-2.4)
Cattle Tested	911,435	638,862	-29.9
Reactor Cattle	9,837	6,444	-34.5
Percent	1.1	1.0	(-0.1)
Ring Tests			
Herd Tests	111,256	94,620	-15.0
Suspicious Herd Tests	1,460	968	-33.7
Percent	1.3	1.0	(-0.3)
Vaccinations (Calfhood)	413,151	449,793	+8.9
Certification of Counties			
Modified Certified			
New	18	45	
Total	45	90	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	45	90	

( ) % Difference

Iowa made great strides in the Cooperative State-Federal Brucellosis Eradication Program during 1965. The accelerated program for the initial certification of counties, which began in the summer of 1963 following the enactment of the Iowa Brucellosis Law, was culminated by the completion of work in December 1965 to qualify the last county.

The MCT program was initiated in August 1965, primarily for the purpose of assisting in the attainment of a free status. A testing program is still in effect which would be adequate to maintain a modified status. Backtagging was initiated at the Sioux City Stockyard as well as at all auction markets in the State. Also, several independent buying stations and slaughtering plants are participating in the program. At present, all Federal-inspected slaughtering establishments located in Iowa cooperate in collecting samples, with two additional noninspected establishments collecting voluntarily. The cessation of blood sample collection from backtagged dairy animals may adversely affect the MCT program in Iowa. The immediate reaction by both Meat Inspection and plant management personnel was to discontinue all collection and backtagging of direct shipments. This loss would be substantial and could result in insufficient returns to qualify areas for recertification.

Plans already have been initiated to establish BRT on a three-rounds-a-year basis. The high percentage of sour samples from produce stations is a problem. No solution is now in sight. Coverage of this class of animals under MCT would fulfill this need.

Iowa has what is in effect a compulsory calf vaccination law. Meetings were held and legislation was introduced to either eliminate or modify the requirement, but the actual legislation passed did not alter the compulsory requirement.

Legislation was passed which now requires the quarantine of all swine herds from which reactors are disclosed. Prior to this, only the reactor was restricted.

KANSAS

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	61,138	71,634	+17.2
Reactor Herds-Lots	1,641	1,682	+2.5
Percent	2.7	2.3	(-0.4)
Cattle Tested	259,922	261,170	+0.5
Reactor Cattle	3,622	3,555	-1.8
Percent	1.4	1.4	(0.0)
Ring Tests			
Herd Tests	47,434	41,419	-12.7
Suspicious Herd Tests	596	348	-41.6
Percent	1.3	0.8	(-0.5)
Vaccinations (Calfhood)	334,343	363,776	+8.8
Certification of Counties			
Modified Certified			
New	0	0	
Total	105	105	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	105	105	

( ) % Difference

The market cattle testing program was greatly improved with the establishment of a backtagging system in all community livestock auctions in both Kansas and Missouri, while backtagging operations have been in effect at the Wichita and Parsons stockyards for over a year. The backtags used in these markets are coded by county using the same lettering system as those used for automobile registration. This permits greater ease in tracing the animals to the point where the tags were applied.

Blood sample collection has been improved with the cooperation of the meat inspection personnel and management at the larger plants.

The Livestock Sanitary Commissioner notified by certified mail all livestock owners that were lagging behind in complying with the requirements of the brucellosis eradication program. A followup by State regulatory personnel was scheduled to achieve the desired response.

The success of this effort and other program activities is illustrated by the marked reduction in the number of herds quarantined because of brucellosis. During the year, the number of quarantined herds was reduced from 700 to 265.

A trial system of maintaining statistics on a State basis rather than on a herd or county basis is under study in Kansas. The entire State is considered to be the eradication area and will be treated as such. This system, if practical, will be of interest to many other areas.

Activities	Calendar Year 1964	1965	Percent Change for 1965
Blood Tests			
Herds-Lots	50,792	43,856	-13.7
Reactor Herds-Lots	1,786	1,574	-11.9
Percent	3.5	3.6	(+0.1)
Cattle Tested	223,007	224,141	+0.5
Reactor Cattle	4,094	3,436	-16.1
Percent	1.8	1.5	(-0.3)
Ring Tests			
Herd Tests	78,853	80,121	+1.6
Suspicious Herd Tests	1,718	1,661	-3.4
Percent	2.2	2.1	(-0.1)
Vaccinations (Calfhood)	118,857	74,812	-37.1
Certification of Counties			
Modified Certified			
New	0	0	
Total	120	120	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	120	120	

( ) % Difference

The screening afforded by the BRT has been valuable in locating sources of infection. Approximately 40,000 milk samples are tested on each round. State regulations prohibit the sale of milk from a BRT-suspicious herd unless the herd owner cooperates in eradicating the disease from the herd.

The problem herd program was utilized to good advantage during 1965. Under this program 28 herds were included with 7 returned to routine BRT and MCT surveillance, which leaves a total of 21 problem herds at the close of 1965. In addition, the supplemental tests have been helpful in eliminating infection from several herds not actually declared as problem herds.

Brucellosis calf vaccination is being deemphasized in Kentucky. State-Federal payment for calf vaccination was discontinued. Vaccination is not recommended except in infected herds currently under quarantine. In spite of this, there has been a considerable amount of calf vaccination at owners' expense. The official vaccination age for calf vaccination in Kentucky is 4 to 6 months.

Swine herd owners have shown increasing interest in herd validation. There are now 17 validated herds; 6 of which were first validated in 1965. Further expansion of the swine brucellosis program is expected in the near future.

Brucellosis suspects disclosed on a test at a Kentucky auction market or stockyard are branded with an "S" and sold for slaughter.

LOUISIANA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	58,900	68,614	+16.5
Reactor Herds-Lots	5,087	4,096	-19.5
Percent	8.6	6.0	(-2.6)
Cattle Tested	342,561	396,072	+15.6
Reactor Cattle	11,235	8,998	-19.9
Percent	3.3	2.3	(-1.0)
Ring Tests			
Herd Tests	5,274	4,877	-7.5
Suspicious Herd Tests	189	234	+23.8
Percent	3.6	4.8	(+1.2)
Vaccinations (Calfhood)	110,374	99,491	-9.9
Certification of Counties			
Modified Certified			
New	0	5	
Total	12	17	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	12	17	

( ) % Difference

Location of brucellosis infected herds in Louisiana by screening tests has not yet been matched by complete testing of these herds. A continuing rate of herd infection of 6.0 percent and cattle infection of 2.3 percent has presented a problem in the volume of herds that need to be tested. Some remaining owner resistance still needs to be overcome. Suspicious reactions on the BRT have been reduced to 5 percent, with complete coverage of all commercial dairies.

The State regulation has been changed to provide for the quarantine of any brucellosis-infected herd that will not follow a regular testing schedule. This provision makes a heavy demand on the available manpower to maintain a 30 to 60 day testing schedule. The major part of on-the-farm blood testing at present is in area testing parishes. Modified-certified status has been achieved in 18 parishes, 7 more are nearing completion of area testing. An additional 8 parishes are circulating the required petitions to establish area testing. Calf vaccination is still encouraged, due to the continued high incidence of the disease, with all vaccinations kept as nearly as possible to the age of 4 months.

The Louisiana Livestock Sanitary Board adopted a regulation requiring backtagging of all adult slaughter cattle at all auction markets in the State to go into effect at the beginning of 1966. The Board also proposed an amendment to the present brucellosis law which would require the testing of all Brucella-infected herds throughout the State. This further provides that when the infection rate for a parish is reduced to 5 percent of the herds and 1 percent of the cattle, all remaining herds not adequately represented by MCT or farm testing must then be tested. This will lead to modified certification without the necessity for petitioning by cattle owners.

Several swine herds have been validated by the use of the card test.

MAINE

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	14,533	15,167	+4.4
Reactor Herds-Lots	36	32	-11.1
Percent	0.2	0.2	(0.0)
Cattle Tested	46,048	46,053	+0.1
Reactor Cattle	42	32	-23.8
Percent	0.1	0.1	(0.0)
Ring Tests			
Herd Tests	6,159	6,422	+4.3
Suspicious Herd Tests	26	17	-34.6
Percent	0.4	0.3	(-0.1)
Vaccinations (Calfhood)	15,800	15,417	-2.5
Certification of Counties			
Modified Certified			
New	0	0	
Total	0	0	
Certified Brucellosis-Free			
New	0	0	
Total	16	16	
Total Certified Counties	16	16	

( ) % Difference

There have not been any changes in the Maine brucellosis program. All herds that are not screened by market cattle testing or the brucellosis ring test are tested every 3 years. There are no infected herds in the State.

No effort is made to increase or decrease the number of calves vaccinated, but there is a gradual decrease in the number of calves vaccinated each year. Vaccinations should decrease rapidly when all States stop requiring incoming animals be vaccinated.

The State of Maine has a small swine population. All of the known purebred or breed herds have been tested and are negative. Some of the garbage-fed herds are infected; they are quarantined and all animals are sold for slaughter.

MARYLAND

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	52,546	51,393	-2.2
Reactor Herds-Lots	187	83	-55.7
Percent	0.4	0.2	(-0.2)
Cattle Tested	275,928	249,756	-9.5
Reactor Cattle	277	101	-63.6
Percent	0.1	0.1	(0.0)
Ring Tests			
Herd Tests	14,795	17,008	+15.0
Suspicious Herd Tests	264	290	+9.8
Percent	1.8	1.7	(-0.1)
Vaccinations (Calfhood)	34,666	34,778	+0.3
Certification of Counties			
Modified Certified			
New	0	0	
Total	15	10	
Certified Brucellosis-Free			
New	2	5	
Total	8	13	
Total Certified Counties	23	23	

( ) % Difference

An intensified effort to increase the number of certified-free counties is showing good results. Counties with large cattle populations are now actively working toward this goal. The incidence of reactors is rapidly decreasing as is the incidence of suspects found in these areas. Improvements in the followup testing of suspects have been attained by assigning this work to regulatory veterinarians.

Only a few problem herds remain on the active list, but the activity under this program has been expanded to include investigations of many other types of brucellosis herd problems.

The number of apparent "false positive" BRT reactions is of concern. Studies on this problem are in progress. Further studies, including bacteriologic methods and supplemental serologic testing, are contemplated on a greater number of animals with suspicious titers in free areas.

There has been some decline in calf vaccination, but many owners are not ready to discontinue this practice. The benefits of vaccinating at younger ages is stressed to all livestock owners desiring to continue calf vaccination.

MASSACHUSETTS

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	10,818	10,060	-7.0
Reactor Herds-Lots	58	36	-38.0
Percent	0.5	0.4	(-0.1)
Cattle Tested	45,947	45,346	-1.4
Reactor Cattle	88	84	-4.6
Percent	0.2	0.2	(0.0)
Ring Tests			
Herd Tests	8,269	7,268	-12.2
Suspicious Herd Tests	73	28	-61.7
Percent	0.9	0.4	(-0.5)
Vaccinations (Calfhood)	14,498	13,047	-10.1
Certification of Counties			
Modified Certified			
New	0	0	
Total	10	2	
Certified Brucellosis-Free			
New	0	8	
Total	4	12	
Total Certified Counties	14	14	

( ) % Difference

Massachusetts is concentrating on completing the necessary testing to qualify the last two modified-certified counties as free areas by April 1966. This accomplishment will complete the certification for the entire New England area.

Along with the effort to complete the certified-free status of all counties in Massachusetts, the pace on validating counties is also quickening. During 1965, four counties were designated as Validated Brucellosis-Free Areas and an additional two counties have been submitted. Industry interest in this program appears to be constantly increasing, and there are now 51 validated brucellosis-free herds in the State.

The problem herd program has been an effective tool in eliminating brucellosis from several badly infected herds. This activity will be a major factor in permitting the State to attain certified-free status prior to the established target date.

There are no plans to deemphasize calf vaccination as yet. The large number of cattle received from other States each year is believed to constitute an unnecessary risk if vaccination were reduced.

MICHIGAN

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	23,613	19,131	-19.0
Reactor Herds-Lots	577	324	-43.8
Percent	2.4	1.7	(-0.4)
Cattle Tested	201,446	163,300	-18.9
Reactor Cattle	1,036	642	-38.1
Percent	0.5	0.4	(-0.1)
Ring Tests			
Herd Tests	91,766	84,380	-8.0
Suspicious Herd Tests	1,435	1,366	-4.9
Percent	1.6	1.6	(0.0)
Vaccinations (Calfhood)	136,980	115,520	-15.7
Certification of Counties			
Modified Certified			
New	0	0	
Total	53	37	
Certified Brucellosis-Free			
New	4	16	
Total	30	46	
Total Certified Counties	83	83	

( ) % Difference

The incidence of brucellosis continued to show a downward trend during 1965. A total of 634 reactors from 189 herds were identified and branded. However, 291 of these reactors, or 45.9 percent, were removed from only 12 herds; while 380 reactors, or 59.9 percent, were removed from herds where Brucella abortus had been previously isolated.

Although calf vaccination showed a decrease of 7.6 percent as compared to 1964, it is felt that a corresponding decrease in eligible calves throughout the State causes this decrease to be insignificant. During 1965, all program vaccination was discontinued. At present, calf vaccination is neither emphasized nor deemphasized.

During 1965, an additional 17 counties were declared Certified Brucellosis-Free. This brings the total number of certified-free counties in Michigan to 47. Testing is currently under way in 29 counties; it is hoped that these will all qualify for certified-free status in 1966. This will leave seven counties to be qualified by July 1, 1967.

Several changes were made or proposed during 1965. These include the discontinuance of testing serum samples at livestock markets. All animals going through a saleyard must be sold direct for slaughter. Only animals to be used as feeders may be removed under a feeder quarantine from livestock yards.

Other proposed changes include strengthening the requirements for quarantine release, testing vaccinated animals less than 30 months of age in quarantined herds, stopping the retesting of reactors in known infected herds, and taking more drastic steps in those herds that do not follow recommendations necessary for the eradication of brucellosis from their herds.

MINNESOTA

Activities	Calendar Year 1964	1965	Percent Change for 1965
Blood Tests			
Herds-Lots	34,625	29,569	-14.6
Reactor Herds-Lots	1,082	985	-9.0
Percent	3.1	3.3	(+0.2)
Cattle Tested	562,887	469,461	-16.6
Reactor Cattle	2,796	2,417	-13.6
Percent	0.5	0.5	(0.0)
Ring Tests			
Herd Tests	226,862	229,829	+1.3
Suspicious Herd Tests	670	691	+3.1
Percent	0.3	0.3	(0.0)
Vaccinations (Calfhood)	199,145	185,931	-6.6
Certification of Counties			
Modified Certified			
New	0	0	
Total	54	51	
Certified Brucellosis-Free			
New	8	3	
Total	33	36	
Total Certified Counties	83	87	

( ) % Difference

A number of acutely infected herds were disclosed during 1965 with a large percentage of animals removed as reactors in many of the herds. These breaks occurred, generally speaking, in areas with a low level of vaccination. As in the case with the acute infection, the disease had to run its course, and the problem herd approach was not applicable in its true sense. A procedure of retesting the acutely infected herds at increased frequency intervals of 10 to 12 days and of removal of all titered animals appears to offer promise. It would appear, however, that the authority to handle all animals in such herds as reactors regardless of the serological picture on a given test would probably be more economical in the long run and certainly eliminate the possibility of extension of brucellosis.

During the past few years, there has been a marked shift from dairy operations to beef-type cattle operations in many areas. Although State regulations adequately spell out control for movement, it is suspected that infection is being introduced via illegal transportation of animals from other areas where the brucellosis eradication program has not reached the certification stage.

Minnesota is a training station for Brucella epidemiologists; however, a trained epidemiologist is not currently assigned to the State. The assignment of an epidemiologist for full-time field activity would benefit the program by developing continuity in the problem herd investigations.

The swine herd validation program is on a volunteer basis and at owner expense; however, there is an increasing interest in swine brucellosis eradication on the part of the industry.

MISSOURI

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	32,330	62,272	+92.6
Reactor Herds-Lots	1,255	1,140	-9.2
Percent	3.9	1.8	(-2.1)
Cattle Tested	470,880	511,155	+8.6
Reactor Cattle	2,383	2,328	-2.4
Percent	0.5	0.5	(0.0)
Ring Tests			
Herd Tests	96,628	79,876	-17.4
Suspicious Herd Tests	785	785	0.0
Percent	0.8	0.9	(+0.1)
Vaccinations (Calfhood)	382,691	394,424	+3.1
Certification of Counties			
Modified Certified			
New	0	0	
Total	114	114	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	114	114	

( ) % Difference

Surveillance under the MCT program was greatly improved during 1965. Implementation of the backtagging procedure in all markets was achieved, which resulted in more than 110,000 backtags being applied in the last 4 months. Blood sample recovery jumped from 25 percent of the animals backtagged to 55 percent during the same period. Continual improvement in this phase of the MCT program is expected.

Missouri is reorganizing the records section utilizing the rapid-data-processing system to increase the efficiency in maintaining the necessary data. An attempt is being made to collect information on a Statewide basis to qualify the entire State as one unit in recertification work.

In preparation of working toward free-status, the laboratory converted from the standard-plate test to the standard-tube test as the routine test for all blood samples. Further, preparatory measures involved stepping up the BRT coverage to four times per year. These changes are expected to detect additional reactors sooner than before, thus, reducing the rate of spread of the disease.

No difficulties are foreseen in continuing to deemphasize calf vaccination. A review of this program will be made to determine the effect of the deemphasis and the possibility of even further reductions in the use of vaccines.

MISSISSIPPI

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	97,908	118,732	+21.3
Reactor Herds-Lots	5,605	6,005	+7.3
Percent	5.7	5.1	(-0.6)
Cattle Tested	275,176	366,271	+33.1
Reactor Cattle	10,121	11,420	+12.8
Percent	3.7	3.1	(-0.6)
Ring Tests			
Herd Tests	16,355	15,762	-3.7
Suspicious Herd Tests	514	501	-2.6
Percent	3.1	3.2	(+0.1)
Vaccinations (Calfhood)	121,499	111,472	-8.3
Certification of Counties			
Modified Certified			
New and Reinstated	1	3	
Removed	1	0	
Total	47	50	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	47	50	

( ) % Difference

The Livestock Sanitary Board amended the regulations to include the requirement that all sales barns permit backtagging on all slaughter cattle. Also included in this amendment was the provision requiring slaughtering establishments in the State to backtag and to collect blood samples from all eligible cattle purchased directly from the farm for slaughter. The expansion of the MCT program under these new regulations will provide a much sounder surveillance system.

The State directed new efforts into enforcing existing State laws to obtain the cooperation of the owners of infected herds who were objecting to the test. Many of these herds are now being tested.

Other regulations affecting the success of the eradication program adopted during the year included a provision restricting the sale and use of Strain 19 vaccine to veterinarians only. The interstate movement of livestock from salesyard to salesyard was also regulated to provide more control over this type of movement.

Calf vaccination is to be continued at the present rate until the incidence of infection is reduced to a low level. When the State achieves modified-certified status, this phase of the program will be reviewed for possible modification of policy.

Some interest in swine brucellosis has been expressed by the swine industry, but no concentrated effort is planned for the immediate future to expand this program.

MONTANA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	24,896	30,140	+21.1
Reactor Herds-Lots	116	131	+12.9
Percent	0.5	0.4	(-0.1)
Cattle Tested	118,960	147,748	+24.2
Reactor Cattle	224	302	+34.8
Percent	0.2	0.2	(0.0)
Ring Tests			
Herd Tests	9,692	8,766	-9.6
Suspicious Herd Tests	20	20	0.0
Percent	0.2	0.2	(0.0)
Vaccinations (Calfhood)	297,133	290,772	-2.2
Certification of Counties			
Modified Certified			
New	2	0	
Total	54	54	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	54	54	

( ) % Difference

The gradual reduction in the number of quarantined herds is continuing. At present, 38 counties have no known Brucella-infected herds. There are only 29 infected herds in the remaining 18 counties. A concentrated effort is being made to eliminate the infection from these herds at the earliest possible date in order to advance Montana to a Certified Brucellosis-Free State.

The number of animals screened under the MCT program is constantly increasing. The added coverage by this method will be instrumental in achieving and maintaining brucellosis-free status.

All animals vaccinated for brucellosis in Montana are vaccinated at owner expense since free vaccination was discontinued in March 1965 on the Indian Reservations. Animals vaccinated at above-recommended ages are interfering with the MCT program. On investigation, many of the reactions disclosed under this surveillance system were found to be in this class of animals.

Supplemental tests are used occasionally to support the investigation on infected herds, but there are no problem herds recognized as such in Montana at this time.

An interest has been expressed in Montana to work toward a validated-free status. A survey conducted in 1963 indicated the incidence of swine brucellosis is very low; the achievement of status would be comparatively easy. A review of the cost and manpower requirements to carry out this objective is under study.

NEBRASKA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	20,907	23,056	+10.3
Reactor Herds-Lots	675	557	-17.5
Percent	3.2	2.4	(-0.8)
Cattle Tested	278,350	305,767	+9.8
Reactor Cattle	1,703	1,296	-23.9
Percent	0.6	0.4	(-0.2)
Ring Tests			
Herd Tests	47,649	55,529	+16.5
Suspicious Herd Tests	252	321	+27.4
Percent	0.5	0.6	(+0.1)
Vaccinations (Calfhood)	382,682	389,247	+1.7
Certification of Counties			
Modified Certified			
New	2	3	
Total	63	66	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	63	66	( ) % Difference

The brucellosis program made very significant advances in Nebraska during 1965--mainly because of the acceptance by the Nebraska Stock Growers Association of the MCT method for certification and recertification in the range area. The officers of this Association have worked closely with the Livestock Sanitary officials to gain the confidence of the beef producers in this program. A Resolution was passed at the annual meeting in favor of this method of certification and of urging their members to participate. The Association also has contacted auction market and public stockyard officials and requested their cooperation.

The auction markets, for the most part, have been very cooperative in allowing backtagging at their markets. The big obstacle has been the refusal of the commission firms of the Omaha Union Stockyards to allow backtagging of eligible cattle passing through that market except on request of each individual consignor. The largest commission firm, which handles more than 50 percent of eligible cattle, anticipates changing in the near future to backtagging all eligible cattle consigned to their firm unless the consignor specifically states that he does not wish the cattle backtagged.

Nebraska cattle producers have complete confidence in official vaccination. Deemphasis of this phase of the brucellosis program would be untimely. However, the livestock producers have been informed that vaccination is not a panacea and will not, in itself, eradicate brucellosis.

As Nebraska is not entirely certified, an official problem herd program has not been established. However, any beef herd in which brucellosis continually has recurred is considered to be a problem herd, and the tube test is used. In dairy herds with a similar problem, individual milk samples and tube tests have been useful to find "hidden" reactors.

The swine brucellosis program continues to be based upon voluntary participation. One of the criteria for a specific pathogen free (SPF) herd is that the herd remains free of swine brucellosis. As there are many SPF herds in this State, there are also many Validated Brucellosis-Free swine herds.

Nebraska is expected to attain modified certified status by utilizing the expanding MCT coverage.

NEVADA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	1,080	396	-63.4
Reactor Herds-Lots	15	1	-93.4
Percent	1.4	0.3	(-1.1)
Cattle Tested	19,934	12,617	-36.8
Reactor Cattle	22	1	-93.5
Percent	0.1	0.1	(0.0)
Ring Tests			
Herd Tests	601	594	-1.2
Suspicious Herd Tests	1	0	
Percent	0.2	0.0	(-0.2)
Vaccinations (Calfhood)	68,491	57,272	-16.4
Certification of Counties			
Modified Certified			
New	0	0	
Total	10	4	
Certified Brucellosis-Free			
New	5	6	
Total	7	13	
Total Certified Counties	17	17	

( ) % Difference

The brucellosis eradication campaign is progressing very satisfactorily in Nevada. Of the 17 counties, 13 have now been declared Certified Brucellosis-Free. A concentrated effort is being made in the four remaining counties in anticipation of completing these before turnout time this spring. So far, no problem herds have been found.

The majority of the backtagged animals are slaughtered at packing plants in the adjacent States. Investigations of suspicious findings to the agglutination test usually reveal that the suspects are vaccinated animals under 30 months of age, vaccinated above the recommended ages or from a herd that has a high percentage of vaccinated animals.

The age limits for calf vaccination were lowered and the effort to deemphasize calf vaccination is being continued.

Of the 17 counties, 16 are validated for swine brucellosis. It is anticipated that the entire State will be validated within a short time.

All goats have been tested with negative results.

NEW HAMPSHIRE

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	4,073	3,594	-11.8
Reactor Herds-Lots	12	14	+16.7
Percent	0.3	0.4	(+0.1)
Cattle Tested	53,407	51,498	-3.6
Reactor Cattle	19	27	+42.1
Percent	0.04	0.05	(0.01)
Ring Tests			
Herd Tests	3,995	4,013	+0.5
Suspicious Herd Tests	26	31	+19.2
Percent	0.7	0.8	(+0.1)
Vaccinations (Calfhood)	10,071	9,778	3.0
Certification of Counties			
Modified Certified			
New	0	0	
Total	0	0	
Certified Brucellosis-Free			
New	0	0	
Total	10	10	
Total Certified Counties	10	10	

( ) % Difference

New Hampshire is a brucellosis-free State; there have not been any change in the program. All herds in the State are blood tested annually.

There has been one brucellosis problem herd during the past year. The herd is being blood tested at 2-to-3-week intervals; supplemental tests are conducted by a brucellosis epidemiologist.

The calf vaccination program is continuing at a normal rate. No effort is made to increase or decrease the number of calves vaccinated, but there is a gradual decrease in the number of calves vaccinated each year.

Swine brucellosis is not known to be a problem in this State. Most of the slaughter hogs are shipped out of the State. There is only one plant in the State that slaughters hogs, 50 or less per week. All sows and boars slaughtered at this plant for a 4-month period were tested and did not reveal any infected herds.

NEW JERSEY

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	4,751	2,932	-38.3
Reactor Herds-Lots	92	44	-52.2
Percent	1.9	1.5	(-0.4)
Cattle Tested	101,674	60,657	-40.4
Reactor Cattle	135	55	-59.3
Percent	0.1	0.1	(0.0)
Ring Tests			
Herd Tests	6,382	5,991	-6.2
Suspicious Herd Tests	135	82	-39.3
Percent	2.1	1.4	(-0.7)
Vaccinations (Calfhood)	13,606	12,377	-9.1
Certification of Counties			
Modified Certified			
New	0	0	
Total	9	8	
Certified Brucellosis-Free			
New	0	1	
Total	12	13	
Total Certified Counties	21	21	

( ) % Difference

The brucellosis eradication program has been highly successful in reducing the incidence of brucellosis. A 460 percent (from 428 to 93) decrease in number of reactor disclosed by testing occurred during the last 5 years. Last year only 93 reactors were detected in 71 herds. This low ratio of reactor animals per reactor herd is consistent with the findings in some other States which have lowered the infection rate to a very low level. In nearly all cases, the removal of the reactor animals restore the negative status of the herd; no further indication of Brucella infection occurred. However, the isolation of Brucella organisms from some animals proved that the disease is still present.

Detailed studies are conducted on the serum and milk from each reactor to develop additional information on the epidemiology of brucellosis in New Jersey herds. This will provide a basis for analyzing the present procedures and for proposing new procedures to maintain the rate of progress toward eventual eradication.

The deemphasis of the calf vaccination program has been discussed with representatives of the dairy industry. The present attitude of the livestock industry favors a continuation of this program at this time.

Swine brucellosis has not been pursued to any degree in New Jersey. The swine population is almost exclusively a garbage feeding operation. Beginning in the early 1950's the industry first had to deal with vesicular exanthema eradication and in the early 1960's with hog cholera eradication. Both of these programs involved considerable dislocation and readjustment in industry's philosophy and attitude. Under such circumstances the introduction of a swine brucellosis program was not welcome. It is hoped that an interest in swine brucellosis eradication will develop during the coming year.

NEW MEXICO

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	15,254	19,471	+27.6
Reactor Herds-Lots	99	88	-11.2
Percent	0.6	0.5	(-0.1)
Cattle Tested	56,038	58,852	+5.0
Reactor Cattle	317	200	-37.0
Percent	0.6	0.3	(-0.3)
Ring Tests			
Herd Tests	1,338	1,451	+8.4
Suspicious Herd Tests	13	234	+1800.0
Percent	1.0	16.1	(+15.1)
Vaccinations (Calfhood)	17,534	16,916	-3.6
Certification of Counties			
Modified Certified			
New	0	0	
Total	32	32	
Certified Brucellosis-Free			
New	0*	0*	
Total	0	0	
Total Certified Counties	32	32	

( ) % Difference

*Three Indian Reservations qualified as Certified Brucellosis-Free Areas.

Needs for improvement in New Mexico brucellosis program activities include increased coverage of marketed cows with MCT backtags, increased collection of blood samples from backtagged cows at smaller slaughtering establishments, and perhaps a system of collecting blood samples from swine at slaughtering establishments for a check on the incidence of swine brucellosis.

District personnel are now contacting the management at the auction markets in order to establish MCT backtagging at all auctions.

Specifically approved slaughtering establishments are to be contacted again concerning a blood-sample-collection program at these smaller plants.

It is believed that the deemphasis of calf vaccination should be considered as a program advancement in New Mexico. During FY 1964, more than 28,000 calves were vaccinated. Of these, 3,300 were at owners' expense and the remaining 24,700 at State-Federal expense. During FY 1965, only 15,200 calves were vaccinated--14,700 at owners' expense and the remaining 500 at State-Federal expense. These 500 were in known infected herds.

NEW YORK

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	10,342	11,054	+6.9
Reactor Herds-Lots	347	238	-31.5
Percent	3.4	2.2	(-1.2)
Cattle Tested	119,237	125,249	+5.0
Reactor Cattle	500	452	-9.6
Percent	0.4	0.4	(0.0)
Ring Tests			
Herd Tests	101,165	114,468	+13.1
Suspicious Herd Tests	203	133	-34.5
Percent	0.2	0.1	(-0.1)
Vaccinations (Calfhood)	242,240	234,578	-3.2
Certification of Counties			
Modified Certified			
New	0	0	
Total	49	29	
Certified Brucellosis-Free			
New	9	20	
Total	13	33	
Total Certified Counties	62	62	

( ) % Difference

New York has joined the growing number of States that are collecting BRT samples four times a year. In addition, a study is in progress to evaluate the use of a 2 cc. sample of milk compared to the official procedure. Increasing the sensitivity of the ring test in this manner may overcome some of the problems associated with ever-increasing herd sizes.

A policy of passive deemphasis on calf vaccination is probably closely associated with decline in the number of calves vaccinated during the year. Some resistance to the gradual phasing out of vaccinations is evident with a few veterinarians and livestock owners but no organized opposition to this policy is known.

The rate of progress in certifying additional counties as brucellosis-free continues to be good. The number of "breaks" in the free counties has been minimal, but vaccinated suspects are of concern in these areas and in areas working toward this status.

The problem herd program has been an important phase in reducing the incidence of brucellosis in New York. Studies in conjunction with problem herd investigations are being conducted on the significance of suspect titers in all types of herds, on an evaluation by bacteriologic methods of several supplemental serologic tests, and on the use of the complement-fixation test in program work.

NORTH CAROLINA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	20,527	17,431	-15.1
Reactor Herds-Lots	240	235	-2.1
Percent	1.2	1.3	(+0.1)
Cattle Tested	303,375	284,809	-6.2
Reactor Cattle	541	379	-30.0
Percent	0.2	0.1	(-0.1)
Ring Tests			
Herd Tests	18,928	17,406	-8.1
Suspicious Herd Tests	118	103	-12.8
Percent	0.6	0.6	(0.0)
Vaccinations (Calfhood)	27,535	26,306	-4.5
Certification of Counties			
Modified Certified			
New	0	0	
Total	87	84	
Certified Brucellosis-Free			
New	4	3	
Total	13	16	
Total Certified Counties	100	100	

( ) % Difference

The improvement in the overall MCT program is of significance. Progress has been made in obtaining more information as to herds of origin from small dealers. Arrangements have been made with some packers to backtag cattle in direct shipments from farm or ranch to slaughtering establishment. This has indications of materially adding to the program; if it proves successful, it will be extended. The backtagging program has relieved the field veterinarians' work load to the extent that more epidemiological work and related duties can be performed by them.

The training received by one of the field veterinarians in brucellosis problem herd work is a definite asset to the program. This work is showing promising results as indicated by rapidly diminishing infection rates in the herds cooperating in this work.

Calf vaccination is not being emphasized although a number of requests for vaccination of calves against brucellosis are being received.

NORTH DAKOTA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	35,968	24,169	-32.9
Reactor Herds-Lots	787	722	-8.3
Percent	2.2	3.0	(+0.8)
Cattle Tested	202,056	170,406	-15.7
Reactor Cattle	2,263	1,645	-27.4
Percent	1.1	1.0	(-0.1)
Ring Tests			
Herd Tests	42,126	44,361	+5.3
Suspicious Herd Tests	193	250	+29.5
Percent	0.5	0.6	(+0.1)
Vaccinations (Calfhood)	266,898	261,052	-2.2
Certification of Counties			
Modified Certified			
New	3	0	
Total	53	53	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	53	53	

( ) % Difference

The most significant advance made in the brucellosis eradication program during 1965 is the reduction in the number of infected herds. On January 1, 1965, approximately 225 known infected herds were under quarantine. Resulting from a concentrated effort on infected herds following Statewide certification, the number was reduced to 145 on January 1, 1966.

Another significant advance has been made in the number of cattle identified under the MCT program. During 1964, approximately 106,000 cattle were backtagged. During 1965, 164,000 North Dakota cattle were backtagged.

The greatest need in the brucellosis eradication program is improved identification of dealer cattle. In most instances, this group of animals are not backtagged because of inability to determine origin. The State Veterinarian and representatives of the cattle industry in North Dakota have publicly stated that they feel de-emphasis of calf vaccination should not be initiated at this time.

The first swine herd was qualified for Validated Brucellosis-Free status during 1965.

OHIO

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	50,170	44,176	-12.0
Reactor Herds-Lots	744	471	-36.7
Percent	1.5	1.1	(-0.4)
Cattle Tested	250,187	246,324	-1.6
Reactor Cattle	1,410	802	-43.2
Percent	0.6	0.3	(-0.3)
Ring Tests			
Herd Tests	84,353	94,041	+11.5
Suspicious Herd Tests	941	798	-15.2
Percent	1.1	0.8	(-0.3)
Vaccinations (Calfhood)	76,516	77,934	+1.9
Certification of Counties			
Modified Certified			
New	8	0	
Total	88	77	
Certified Brucellosis-Free			
New	0	11	
Total	0	11	
Total Certified Counties	88	88	( ) % Difference

Ohio has continued to measure rapid progress in brucellosis eradication during 1965. Since reaching Statewide modified-certified status in June 1964, 11 counties qualified as brucellosis-free. Active program efforts directed towards qualifying an additional number of counties were initiated in calendar year 1965 and are progressing on schedule. Approximately 100 herds were removed from the brucellosis quarantine list. Ohio currently has 96 herds under quarantine because of brucellosis out of a total herd population of about 90,000.

Two major items are responsible for this present low level: (1) The splendid efforts put forth by the field personnel and (2) the increasing effectiveness of the laboratory procedures, particularly in the problem herd and in the brucellosis milk ring testing sections. Collection of milk samples from Ohio sources has effectively made the transition to a four times per year cycle, which results in increased herd surveillance and effectiveness through earlier detection of suspicious herds.

Improvement also was witnessed in the control and supervision of livestock market activities and animal movements. Ohio is now implementing Statewide meat inspection, which can also be expected to aid in the improvement of the overall brucellosis eradication program.

There is an apparent increase in the number of brucellosis calf vaccinations in spite of the fact that no efforts have been made to stimulate this activity. Extra effort is being directed to the herd owners and veterinarians to emphasize the importance of vaccination at an early age if strain 19 is to be utilized. This has been done through recommendations listed in appropriate publications, such as the respective breed journals and by direct mailings to individual owners.

At this time, swine brucellosis has not been, nor does it appear to be a significant problem.

The number of counties qualifying as certified-free and the ultimate completion date for the entire State will depend upon the funds available for payment of the testing.

Other needs for program improvement are encountered in the MCT program and are effectively adapting it to this State so that it will provide adequate screening for herds not already surveyed by the BRT activities.

OKLAHOMA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	74,153	149,787	+102.0
Reactor Herds-Lots	7,085	6,714	-5.3
Percent	9.6	4.5	(-5.1)
Cattle Tested	508,061	789,494	+55.4
Reactor Cattle	14,758	17,000	+15.2
Percent	2.9	2.2	(-0.7)
Ring Tests			
Herd Tests	11,984	12,105	+1.0
Suspicious Herd Tests	304	313	+3.0
Percent	2.5	2.6	(+0.1)
Vaccinations (Calfhood)	231,741	229,862	-0.9
Certification of Counties			
Modified Certified			
New	3	4	
Total	18	22	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	18	22	

( ) % Difference

Many encouraging changes occurred in Oklahoma during 1965. The legislature appropriated additional State funds to carry out program activities and passed legislation to permit quarantine of herds thus eliminating the necessity for county petitioning. The State-Federal cooperative program was greatly improved through these actions.

However, additional measures are needed to control and restrict movement of livestock and to regulate dealers through licensing requirements.

The State appropriated money for a larger budget with the understanding that a specific number of counties would be certified each year. This provision is a difficult challenge because of the relatively high infection rate in Oklahoma.

The MCT program is used as much as possible to qualify herds. However, the demand for qualifying counties prevents utilizing all of the leads provided by MCT data in nonworking counties. The effort is concentrated in area counties so that the available personnel will be used to greatest advantage. Some of the herd owners in the area counties have insisted on entire herd tests even though the herd qualified under MCT coverage. Although this is a duplication of effort, the public relations aspect was considered to be of prime importance at this time and these herds were area tested as well.

Vaccination was discontinued at auction markets and in non-area counties to conserve funds for area-test work and payment of indemnities. The large number of reactors disclosed requires a considerable portion of the budget to be reserved for indemnity purposes.

OREGON

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	43,386	54,738	+26.2
Reactor Herds-Lots	172	135	-22.0
Percent	0.4	0.2	(-0.2)
Cattle Tested	133,445	146,083	+9.5
Reactor Cattle	273	275	+0.7
Percent	0.2	0.2	(0.0)
Ring Tests			
Herd Tests	13,432	13,496	+0.5
Suspicious Herd Tests	191	137	-20.0
Percent	1.4	1.0	(-0.4)
Vaccinations (Calfhood)	144,412	123,297	-15.0
Certification of Counties			
Modified Certified			
New	0	0	
Total	36	21	
Certified Brucellosis-Free			
New	0	15	
Total	0	15	
Total Certified Counties	36	36	

( ) % Difference

The number of problem herds have been greatly reduced. Epidemiologic investigations have successfully reduced the number of problem herds in Oregon. The one outstanding problem herd continues to have infection, but the owner is now taking active interest in a cooperative effort to eliminate this disease. New herds are being added to the program as rapidly as possible.

The Livestock Disease Advisory Committee has proposed that the necessary action be taken to qualify all eastern Oregon counties for free-status by January 1, 1967. This position was taken to alleviate the expected impact caused by phasing out calf vaccination. In the past, most of the vaccination has been done in the range areas of eastern Oregon and very little in the concentrated dairy and beef areas of western Oregon.

The relatively low incidence of brucellosis in Oregon, coupled with an effective MCT program, should make this goal feasible and obtainable.

An effort to further improve the MCT program is being considered. Ranchers have not been notified of negative results obtained on marketed animals and, therefore, have not been cognizant of the importance of backtagging all marketed animals. An increase in the number of backtagged cattle shipped directly to slaughter would be of material value in certifying these areas. A reporting system to the rancher might be the stimulus needed to obtain this response.

PENNSYLVANIA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	35,988	86,087	+139.2
Reactor Herds-Lots	227	321	+41.4
Percent	0.6	0.4	(-0.2)
Cattle Tested	562,432	592,763	+5.4
Reactor Cattle	398	440	+10.6
Percent	0.1	0.1	(0.0)
Ring Tests			
Herd Tests	89,536	85,895	-4.1
Suspicious Herd Tests	221	166	-24.9
Percent	0.2	0.2	(0.0)
Vaccinations (Calfhood)	134,139	132,520	-1.3
Certification of Counties			
Modified Certified			
New	0	0	
Total	55	50	
Certified Brucellosis-Free			
New	2	5	
Total	12	17	
Total Certified Counties	67	67	

( ) % Difference

There were several significant advances in the brucellosis eradication program in Pennsylvania during 1965. The most notable was the inauguration of a Market Cattle Testing program. This program began as a pilot project in four livestock auctions on April 1, 1965. It was expanded to cover the entire State by July 1, 1965. Recent statistics have shown that about 20,000 backtags are being applied each month with a 70-percent rate of return. It is anticipated that this program will enable Pennsylvania to make rapid strides toward a Statewide Certified Brucellosis-Free status.

Another notable advance was the increased interest in establishing more Certified Brucellosis-Free counties. The Pennsylvania Bureau of Animal Industry rescheduled the countywide area testing program so that each county is being completely tested within 18 months. This may make it possible for certain counties, which are not now receiving adequate MCT coverage, to achieve Certified Brucellosis-Free status. When the MCT program reaches maturity, the area testing program will probably be discontinued.

The problem herd program continued to progress during 1965. Several of the most troublesome herds have had negative tests and appear to be free of the disease. An epidemiological study of all newly infected herds has been inaugurated in conjuction with the study of problem herds. A great deal of information has come to light. One of the more interesting observations revealed has been the close proximity of newly infected herds. Many of them occur in pairs or triplets within the same township.

Swine brucellosis would seem to be almost nonexistent in Pennsylvania. There are 32 validated herds which include most of the major breeders in the State. The validated herd program is gaining momentum. This program seems to be the major focal point for interest in swine brucellosis at the present time.

RHODE ISLAND

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	1,479	1,287	-13.0
Reactor Herds-Lots	2	1	-50.0
Percent	0.1	0.1	(0.0)
Cattle Tested	9,876	8,613	-12.8
Reactor Cattle	2	1	-50.0
Percent	0.1	0.1	(0.0)
Ring Tests			
Herd Tests	1,113	1,085	-2.5
Suspicious Herd Tests	5	5	0.0
Percent	0.4	0.5	(+0.1)
Vaccinations (Calfhood)	1,422	1,398	-1.7
Certification of Counties			
Modified Certified			
New	0	0	
Total	0	0	
Certified Brucellosis-Free			
New	5	0	
Total	5	5	
Total Certified Counties	5	5	

( ) % Difference

The brucellosis ring test is the basic means of surveillance work in Rhode Island. However, some market cattle testing is used to supplement the screening afforded by the ring test. Ear tags, rather than backtags, have been used to maintain animal identification; but plans are being made to work out a backtagging system with a limited number of beef herds. All sampling under this program is done without cost to the Division by negotiating directly with the packer.

No attempt is being made at this time to deemphasize calf vaccination. The cattle industry in Rhode Island purchased a large number of replacement cattle from other areas each year. This is considered to be a potential risk if the local livestock were fully susceptible to the disease.

A swine brucellosis program is under way on a limited and voluntary basis. Plans to increase the expansion of this program are being formulated.

SOUTH CAROLINA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	24,318	31,164	+28.2
Reactor Herds-Lots	425	361	-15.1
Percent	1.7	1.2	(-0.5)
Cattle Tested	146,717	146,847	+0.1
Reactor Cattle	655	645	-1.5
Percent	0.4	0.4	(0.0)
Ring Tests			
Herd Tests	4,582	5,762	+25.8
Suspicious Herd Tests	24	83	+45.8
Percent	0.5	1.4	(+0.9)
Vaccinations (Calfhood)	24,655	22,192	-10.0
Certification of Counties			
Modified Certified			
New	0	0	
Total	45	45	
Certified Brucellosis-Free			
New	1	0	
Total	1	1	
Total Certified Counties	46	46	

( ) % Difference

Efforts to increase the number of livestock markets participating in the backtagging operation of the MCT program were highly successful with all markets now cooperating. This achievement will relieve much of the farm testing necessary to qualify additional areas for certified-free status.

Although the number of samples collected at slaughter establishments rose during 1965, more emphasis will be on increasing the tracing efficiency. Tracing of reactors found under the MCT program has been an effective tool in reducing the incidence of brucellosis.

An epidemiologist has been assigned to this State to continue and expand the problem herd activities. In addition to this responsibility, the epidemiologist will be involved with a project conducted in cooperation with Clemson University to evaluate the effect of brucellosis vaccination of 3 month-old calves. Preliminary evidence from other projects indicates that this practice would alleviate much of the problem associated with retained vaccinal titers and still provide the same degree of resistance to infection as developed by older calves.

SOUTH DAKOTA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	40,667	55,214	+35.8
Reactor Herds-Lots	1,279	1,208	-5.6
Percent	3.1	2.2	(-0.9)
Cattle Tested	213,143	396,667	+86.1
Reactor Cattle	2,876	3,258	+13.3
Percent	1.3	0.8	(-0.5)
Ring Tests			
Herd Tests	34,137	31,374	-8.1
Suspicious Herd Tests	621	324	-47.8
Percent	1.8	1.0	(-0.8)
Vaccinations (Calfhood)	380,629	406,096	+6.7
Certification of Counties			
Modified Certified			
New and Reinstated	2	1	
Removed	1	0	
Total	37	38	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	37	38	

( ) % Difference

The brucellosis eradication program in South Dakota has progressed rapidly during the past several months. One county has been certified and several more are approaching modified certified status. A change in the statutes, sponsored by the South Dakota Stockgrowers, declared the entire State an eradication area. This change stimulated the advancements made in 1965.

The need for some problem herd program capability has been felt. This is especially true in the eastern parts of South Dakota and in dairy herds.

No change in the vaccination program of this State should be made. The cattlemen rely heavily upon the protection this program affords.

TENNESSEE

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	37,538	38,524	+2.6
Reactor Herds-Lots	2,104	1,968	-6.5
Percent	5.6	5.1	(-0.5)
Cattle Tested	151,765	250,211	+64.9
Reactor Cattle	4,801	5,982	+24.6
Percent	3.2	2.4	(-0.8)
Ring Tests			
Herd Tests	80,865	91,584	+13.3
Suspicious Herd Tests	1,139	914	-19.8
Percent	1.4	1.0	(-0.4)
Vaccinations (Calfhood)	166,674	151,771	-8.9
Certification of Counties			
Modified Certified			
New	0	0	
Total	95	90	
Certified Brucellosis-Free			
New	0	5	
Total	0	5	
Total Certified Counties	95	95	

( ) % Difference

During 1965, five counties were submitted and approved as brucellosis free. This was accomplished through the use of the MCT program.

BRT samples are now being collected four times a year in lieu of the three rounds per year in the past.

Under the MCT program, total blood samples collected rose to 150,804 in 1965, as compared to calendar year 1964, which had 88,866. Overall rate of infection was 1.65 percent as compared to 1964's 2.05 percent.

Calf vaccination entered the deemphasis phase July 1. This is being accomplished by discontinuing the mailing of inquiry cards with a subsequent authorization on all requests. At this time vaccination is on a voluntary basis for the herd owners who still desire vaccination. This service is available from their licensed accredited veterinarian. News releases and radio interviews present the idea that vaccination is no longer necessary because of the very low rate of exposure. The necessity for vaccinating between the ages of 4 and 6 months regardless of breed is strongly emphasized whenever the producer and the veterinarian feel that vaccination should still be done. The biggest obstacle in reducing vaccination has been the requirements of many feeder calf sales that all heifers consigned must be vaccinated. Contracts with officials in charge of feeder-calf sales are being made to have their requirements on this point changed.

The first county in Tennessee attained Validated Brucellosis-Free status in 1965. A few others are nearing completion to qualify for such status. These have been counties with a very small swine breeding population. To accomplish the goal of all counties validated free, plans are being formulated to adapt a screen testing program on the kill floor at slaughter. At this point, these plans have not been firmed up.

TEXAS

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	220,977	185,920	-15.9
Reactor Herds-Lots	8,928	6,931	-22.4
Percent	4.0	3.7	(-0.3)
Cattle Tested	1,078,420	1,208,251	+12.0
Reactor Cattle	22,750	22,344	-1.8
Percent	2.1	1.8	(-0.3)
Ring Tests			
Herd Tests	14,179	14,406	+1.6
Suspicious Herd Tests	537	654	+21.8
Percent	3.8	4.5	(+0.7)
Vaccinations (Calfhood)	345,473	289,324	-16.3
Certification of Counties			
Modified Certified			
New and Reinstated	15	18	
Removed	4	0	
Total	117	135	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	117	135	

( ) % Difference

During 1965, Texas reached and passed the halfway point toward Statewide certification. With the addition of 18 newly certified counties, 53 percent of the counties in Texas now enjoy modified certified status.

The continuing success of the MCT program is playing an important role in recertifying and initially certifying these counties. During the last 6 months of 1965, Texas reports that 97.5 percent of all MCT reactors are traceable to the herd of origin. By June 1966, all recertification is expected to be accomplished by using only BRT and MCT surveillance.

Initial certification will continue to require a combination of the surveillance testing methods and area testing to qualify those herds not adequately screened by MCT.

State officials have stated that it is possible to achieve Statewide certification by January 1, 1968, by using the methods presently available. It is anticipated that the card test can be effectively utilized in many range areas in Texas to assist in the certification of the remaining counties. Plans have been made to use this test in one or two range counties where it should expedite the testing by eliminating the necessity for corralling or rounding up the herd for identification of reactors at a later date.

The prompt removal of reactors will also greatly assist in Texas.

UTAH

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	11,643	11,556	-0.7
Reactor Herds-Lots	64	70	+9.4
Percent	0.5	0.6	(+0.1)
Cattle Tested	39,417	31,022	-21.3
Reactor Cattle	131	170	+29.8
Percent	0.3	0.5	(+0.2)
Ring Tests			
Herd Tests	15,380	15,125	-1.7
Suspicious Herd Tests	34	54	+58.8
Percent	0.2	0.4	(+0.2)
Vaccinations (Calfhood)	64,741	67,617	+4.4
Certification of Counties			
Modified Certified			
New	0	0	
Total	0	0	
Certified Brucellosis-Free			
New	9	0	
Total	29	29	
Total Certified Counties	29	29	

( ) % Difference

Recognition of the need to maintain effective surveillance programs to quickly detect newly infected herds led to an increase in the number of animals backtagged during 1965. Direct shipments of eligible cattle from ranch to slaughter is of continuing concern because many of the animals are not adequately identified. This problem is of particular concern when the cattle are moved to out-of-state slaughter points.

The policy on calf vaccination is variable according to the area of the State concerned. In many areas, vaccination is deemphasized because of a history of low incidence of infection. In other areas where brucellosis was a problem, vaccination is encouraged at present. In all areas, stress is placed on vaccinating the heifers at a younger age--preferably between 4 and 6 months.

Supplemental tests are conducted routinely on all samples showing any titer as well as on all animals within an infected herd. Individual quarter samples are collected whenever practical for bacteriologic examination. Tissues are collected from each reactor to attempt isolation of the organism.

A market swine testing system is used in an effort to maintain surveillance over the validated-free areas. Since the entire State is validated, any recurrence of swine brucellosis needs to be detected swiftly.

VERMONT

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	3,216	2,348	-27.0
Reactor Herds-Lots	60	18	-70.0
Percent	1.9	0.8	(-1.1)
Cattle Tested	48,881	34,744	-28.9
Reactor Cattle	108	20	-81.5
Percent	0.22	0.06	(-0.16)
Ring Tests			
Herd Tests	18,671	18,498	-0.9
Suspicious Herd Tests	28	13	-53.6
Percent	0.1	0.1	(0.0)
Vaccinations (Calfhood)	43,890	36,681	-16.4
Certification of Counties			
Modified Certified			
New	0	0	
Total	14	0	
Certified Brucellosis-Free			
New	0	14	
Total	0	14	
Total Certified Counties	14	14	

( ) % Difference

Vermont attained certified-free status during 1965, joining Utah as second State to become both validated and certified-free of brucellosis. The problem herd program was fully utilized in achieving these goals. To maintain this status, all herds disclosing suspicious titers are carefully investigated to guard against the reintroduction of brucellosis.

The BRT is the surveillance method employed in Vermont to detect newly infected herds as quickly as possible. To gain maximum effectiveness, all detectable reactions are considered suspicious; and the frequency of the testing was increased to four times per year. However, the increase in numbers of producing cattle in many dairies is of concern. Possible solutions to the dilution problem in samples from these herds are under consideration.

Calf vaccination in Vermont was mandatory for the last several years until October 1, 1965. Vaccination is now a voluntary program and is being deemphasized as rapidly as possible. The effect of this change is expected to eventually reduce the number of suspects in Vermont. No adverse result of this change in policy is anticipated.

VIRGINIA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	83,310	87,265	+4.7
Reactor Herds-Lots	938	689	-26.5
Percent	1.1	0.8	(-0.3)
Cattle Tested	264,311	261,140	-1.2
Reactor Cattle	1,295	1,014	-21.7
Percent	0.5	0.4	(-0.1)
Ring Tests			
Herd Tests	33,558	33,559	+0.1
Suspicious Herd Tests	438	360	-17.8
Percent	1.3	1.1	(-0.2)
Vaccinations (Calfhood)	77,422	80,891	+4.5
Certification of Counties			
Modified Certified			
New	0	0	
Total	93	68	
Certified Brucellosis-Free			
New	3	25	
Total	5	30	
Total Certified Counties	98	98	

( ) % Difference

The number of known infected herds was reduced from almost 100 to 32 during 1965. During this same period, the number of certified free counties increased from 6 to 34, including counties with the highest livestock populations.

The MCT coverage has been increased mainly by improving the identification and tracing efficiency. All slaughterhouses, regardless of size, are being contacted and the management encouraged to submit blood samples from all adult female cattle slaughtered. Cattle which have been backtagged are identified to the herd of origin by the management, and the blood sample labeled with this information. Approximately one-half of the samples received from the small plants are collected from nonbacktagged animals. The cooperation in this program has been very good; in one area all plants are submitting samples.

An active swine health program has been initiated in Virginia. This program includes brucellosis eradication provisions, as well as other swine diseases.

WASHINGTON

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	38,317	34,317	-10.4
Reactor Herds-Lots	267	75	-71.9
Percent	0.7	0.2	(-0.5)
Cattle Tested	205,475	185,848	-9.6
Reactor Cattle	301	151	-49.8
Percent	0.1	0.1	(0.0)
Ring Tests			
Herd Tests	14,393	12,891	-10.4
Suspicious Herd Tests	75	74	-1.3
Percent	0.5	0.6	(+0.1)
Vaccinations (Calfhood)	89,639	46,488	-48.1
Certification of Counties			
Modified Certified			
New	0	0	
Total	34	2	
Certified Brucellosis-Free			
New	5	32	
Total	5	37	
Total Certified Counties	39	39	

( ) % Difference

Of Washington's 39 counties, 37 are certified as brucellosis-free areas. One county was submitted for such status in December, leaving only one county as a modified certified area in the State. It is expected that this county will qualify as a free area by June 30, 1966.

Calf vaccination is being deemphasized without difficulty. The livestock owners are concerned, however, about the future possibility of discontinuing titer allowance for vaccinates since a high percentage of cattle have been vaccinated.

Additional screening of cattle throughout the State has been attained through collection of blood samples by custom-farm slaughterers and by owner submission of BRT samples from non-BRT herds. This program provides surveillance on animals not covered by the routine BRT and MCT procedures currently in effect.

A limited survey indicated that swine brucellosis is not a problem in Washington. However, plans are being made to conduct a market swine testing program at slaughter establishments where animal identification is maintained to detect infection in the herd of origin.

Blood samples collected by hunters throughout the State were received from 194 deer and 210 elk. All samples tested for brucellosis were negative. This supports the findings on earlier surveys concerning these species.

WEST VIRGINIA

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	59,836	70,896	+18.5
Reactor Herds-Lots	132	198	+50.0
Percent	0.2	0.3	(+0.1)
Cattle Tested	136,243	145,333	+6.7
Reactor Cattle	247	426	+72.5
Percent	0.2	0.3	(+0.1)
Ring Tests			
Herd Tests	9,218	9,433	+2.3
Suspicious Herd Tests	39	35	-10.3
Percent	0.4	0.4	(0.0)
Vaccinations (Calfhood)	7,732	7,136	-7.7
Certification of Counties			
Modified Certified			
New	0	0	
Total	20	9	
Certified Brucellosis-Free			
New	4	11	
Total	35	46	
Total Certified Counties	55	55	

( ) % Difference

The most significant area of progress demonstrable by data is the use made of the MCT Program during 1965. Through use of the MCT data, 18 counties were either initially Certified Brucellosis-Free or recertified as free. The change in Uniform Methods and Rules came at a time when maximum use could be made of the accumulated MCT data.

During 1965 a formal problem herd program was established, completing another program objective. As an adjunct to the problem herd program, all herds showing infection led directly into a combination of zone testing and tracing followed by testing. Zone testing consists of testing all neighboring herds whether contact with the infected herd can be demonstrated or not. In cases of doubt, neighbors of neighbors are tested. In addition, thorough tracing and checking for all possible sources or dispersal of the infection are done. All steps are documented and analyzed by the problem herd specialist. Since inception of this procedure, over 50 percent of the infected herds have been located through epidemiology. Thus, even with more than just adequate MCT coverage, BRT and area testing, thorough epidemiology has quickly proven to be an extremely helpful tool in locating and eliminating foci of infection.

Vaccination of calves with strain 19 vaccine has been steadily declining. This has been due not so much to deemphasis as to deliberate lack of emphasis.

A swine brucellosis program in the State is scarcely in its infancy. Considerable thought has been given to a screening program involving slaughter testing of sows and boars, but various problems have not been solved. The scattered and sparse swine population, coupled with the almost total lack of positive titers found in the limited testing done indicates swine brucellosis is not a serious problem in West Virginia. However, as brucellosis in cattle declines, higher priority will be given to other species to insure total eradication of the disease rather than just the establishment of a negative cattle population.

WISCONSIN

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	31,765	30,729	-3.3
Reactor Herds-Lots	312	136	-56.4
Percent	1.0	0.4	(-0.6)
Cattle Tested	281,027	289,741	+3.1
Reactor Cattle	517	228	-55.9
Percent	0.2	0.1	(-0.1)
Ring Tests			
Herd Tests	251,533	251,232	-0.1
Suspicious Herd Tests	333	318	-4.5
Percent	0.1	0.1	(0.0)
Vaccinations (Calfhood)	538,633	516,498	-4.1
Certification of Counties			
Modified Certified			
New	0	0	
Total	8	0	
Certified Brucellosis-Free			
New	26	8	
Total	64	72	
Total Certified Counties	72	72	

( ) % Difference

Wisconsin has a brucellosis problem herd (BPH) program in operation. It has been expanded to include all positive BRT herds, all market cattle traceback herds, all suspects disclosed on private tests, and all retests of infected herds. Along with this expansion of the scope of the BPH program were the changes in the State of Wisconsin Agriculture regulation allowing the use of the supplementary test results to the greatest advantage in the control of brucellosis.

As in the past, calf vaccination is continuing at a high percentage rate. Wisconsin officials believe that this will be necessary. Until the infection rate in neighboring States is as low or lower than that of Wisconsin, the demand for vaccinated animals by buyers in other States also influenced this position in the calf-vaccination policy. Further, the continued detection of a few infected herds in Wisconsin was judged to be a potential hazard if the vaccination policy were abandoned.

Swine brucellosis has not been much of a problem. As a result of the two infected herds located this past year, the present regulations were believed to be inadequate and steps have been taken to correct this situation.

Several other proposals have been considered in Wisconsin to improve the eradication program. These include extending the quarantine for a 10-month period, compulsory testing, and surveillance of herds adjacent or exposed to infected herds, condemnation of entire herds when it is felt this would be the most economical and efficient method of eradication, and to require livestock dealers to maintain records of cattle sales and purchases to assist with traceback.

WYOMING

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	5,911	7,208	+21.9
Reactor Herds-Lots	78	67	-14.1
Percent	1.3	0.9	(-0.4)
Cattle Tested	51,983	51,112	-1.7
Reactor Cattle	139	126	-9.4
Percent	0.3	0.2	(-0.1)
Ring Tests			
Herd Tests	2,117	2,872	+35.7
Suspicious Herd Tests	10	9	-10.0
Percent	0.5	0.3	(-0.2)
Vaccinations (Calfhood)	149,402	177,696	+18.9
Certification of Counties			
Modified Certified			
New	2	2	
Total	19	21	
Certified Brucellosis-Free			
New	0	0	
Total	0	0	
Total Certified Counties	19	21	

( ) % Difference

Definite progress, though slow, is being made in the eradication of brucellosis in Wyoming. Only a handful of herds remain to be tested in one noncertified county, leaving only one county yet to begin testing for this initial certification. Improvements in public relations with the industry have resolved some of the problems formerly encountered in Wyoming.

Calf vaccination increased during the spring of 1965 as compared with previous years. The present level of vaccination is expected to continue because of the industry confidence in this program. However, some areas may begin to phase out vaccination on a voluntary basis as the eradication program advances. The advantages of vaccinating younger aged calves is being stressed.

PUERTO RICO

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	18,272	27,781	+52.0
Reactor Herds-Lots	788	881	+11.8
Percent	4.3	3.2	(-1.1)
Cattle Tested	212,009	291,842	+37.7
Reactor Cattle	1,655	1,572	-5.0
Percent	0.8	0.5	(-0.3)
Ring Tests			
Herd Tests	3,105	2,402	-22.6
Suspicious Herd Tests	309	162	-47.6
Percent	10.0	6.7	(-3.3)
Vaccinations (Calfhood)	13,345	6,231	-53.3
Certification of Counties			
Modified Certified			
New	0	0	
Total	70	68	
Certified Brucellosis-Free			
New	2	2	
Total	7	9	
Total Certified Counties	77	77	

( ) % Difference

The movement of animals and the concentrated livestock population in Puerto Rico is a problem. The lack of an adequate animal identification regulation hinders the control of livestock movements. A proposed regulation to correct this deficiency was defeated at public hearings. A new proposal to require compulsory identification by backtagging all slaughter cattle has been submitted. This is badly needed to strengthen the MCT program, which is currently conducted with the cooperation of local public health authorities. Traceback of reactors to the herd of origin has been remarkably good considering the lack of any control provisions but would be greatly improved with adequate dealer licensing regulations.

A revised brucellosis quarantine law has been submitted for consideration. The present law is inadequate to achieve the desired results and needs to be extended to cover cattle dealers.

Despite these shortcomings, the animal and herd infection have been reduced by increasing the rate of testing and decreasing the interval between retests. Under the problem herd program, a concentrated effort has been directed on the infected herds in the densely populated dairy area. Many infected animals are detected using supplemental tests which do not react in the reactor range. The removal of these animals has resulted in a number of herds being freed of Brucella infection.

VIRGIN ISLANDS

Activities	Calendar Year 1964	Calendar Year 1965	Percent Change for 1965
Blood Tests			
Herds-Lots	240	269	+12.1
Reactor Herds-Lots	0	0	0.0
Percent	0.0	0.0	(0.0)
Cattle Tested	1,725	2,729	+58.2
Reactor Cattle	0	0	0.0
Percent	0.0	0.0	(0.0)
Ring Tests			
Herd Tests	14	0	
Suspicious Herd Tests	0	0	0.0
Percent	0.0	0.0	(0.0)
Vaccinations (Calfhood)	0	0	0.0
Certification of Counties			
Modified Certified			
New	0	0	
Total	0	0	
Certified Brucellosis-Free			
New	1	0	
Total	3	3	
Total Certified Counties	3	3	

( ) % Difference

The Virgin Islands attained Certified Brucellosis-Free status in January 1964, with no difficulty experienced in maintaining this status. During 1965 no reactors were disclosed on the animals.

An area testing program is currently in progress to qualify the Virgin Islands as a Validated Brucellosis-Free Area. The officials in charge of this program report that no difficulty has been experienced in the work so far.

GPO 902-940